# THE Soybean Digest

OFFICIAL PUBLICATION • AMERICAN SOYBEAN ASSOCIATION

Modern hog rations mean soybean oil meal. See page 21.

MARCH ✦ 1954

VOLUME 14 ✦ NUMBER 5

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# THE Soybean Digest

REG. U. S. PAT. OFF.

HUDSON, IOWA

Vol. 14 • March, 1954 • No. 5


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## THE SOYBEAN DIGEST

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• • •


## THE AMERICAN SOYBEAN ASSOCIATION

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Objectives of the American Soybean Association include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safeguarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the industry.



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# EDITOR'S DESK

**LET'S KEEP SUPPORTS EQUITABLE** The committee called to Washington in early January to confer with U. S. Department of Agriculture officials on the 1954 support program recognized that it was impossible to reach a decision that would be universally popular, as we pointed out on this page in January.

The problem was to select the support program that would keep the crop in its proper relationship with other crops and with the world market and at the same time be of the largest possible benefit to the greatest possible number of growers.

It was with this in mind that the committee accepted the 80-percent-of-parity-support figure since announced by USDA. It was recognized by the committee that if the 90 percent supports were continued soybeans could not compete freely with some other crops in domestic markets. They would not move freely in world trade. At 90 percent support soybeans would move into storage and not into trade. And 90 percent support would induce heavier plantings in 1954 when other crops are controlled.

Always in the past soybeans have been produced for consumption and not for storage. It has been the position of soybean producers that the only sound program would continue moving soybeans into trade. Any program that merely stores them will create far more problems than it will solve, as should be obvious from the experience of other commodity groups that have priced their products out of the market.

But the acceptance of 80 percent of parity was predicated on the continuation of the 75 percent support on cottonseed in 1954. U. S. Department of Agriculture economists regard the 75 percent support on cottonseed as being in right relationship to 80 percent support on soybeans. At this level the products of each group can move into the markets on an equal basis.

The 90-percent-support level on soybeans as compared to the 75-percent level on cottonseed during the past year has placed the soybean industry at a severe disadvantage. (See graphs and discussion by Louis H. Bean on page 20 of this issue.)

But since the announcement of the 80 percent support price on soybeans some cottonseed crusher spokesmen are asking that government support be taken off cottonseed entirely!

If this should be done it will result in soybeans supported at 80 percent of parity competing not only with government surpluses of butter and cottonseed but also with cottonseed products free of support. It will mean that cottonseed products will be channeled into consumption but that soybeans will go into storage.

The American Soybean Association has advocated a support program free of controls and at a reasonable support level. But it will only work if supports on other crops are kept at equivalent levels. It will not work if soybeans are supported and cottonseed not supported. Since soybeans are to be supported the only reasonable course is to support cottonseed also.

**ASA, NSPA WILL MEET TOGETHER** For the first time in history the National Soybean Processors Association and the American Soybean Association will hold their annual meetings together in 1954. This was announced on the Activities of Your Association page in February.

Representatives of ASA, NSPA and the Memphis Merchants Exchange met in Memphis late in February to complete arrangements for the two meetings.

Now it can be announced that both groups will meet at Hotel Peabody in Memphis and the dates will be:

Aug. 30—National Soybean Processors Association.

Aug. 31 and Sept. 1—Formal sessions of the American Soybean Association.

Sept. 1, evening—Annual ASA banquet.

Sept. 2—ASA field day in Arkansas.

The 1948 convention in Memphis was one of the largest and most successful of ASA meetings to date. Now plans are going forward to make the 1954 meetings even bigger and more successful than 1948. With the two groups working together, backed by the strong promotional spirit of the Memphians, this should be accomplished.

It is to be hoped that the joint meetings will be only the first step toward drawing the two groups closer together. Closer cooperation of the processor and producer associations should benefit the entire industry!

You will be hearing more details on these joint meetings in coming months. In the meantime circle the dates on your calendar so you won't forget them.

Make your hotel reservations direct with Hotel Peabody, Memphis, Tenn. Tell the hotel you are attending the meetings.

**IN THIS CASE DUTY IS ONLY AN EXPENSE** "The best laid plans of mice and men" sometimes go astray. And it happens even today! A classic example is our import duty levied on soybeans, and applying on soybean seed.

For a period of years a duty of 2 cents per pound or $1.20 per bushel has been levied by the United States government on all soybeans brought into the United States. The duty was first levied back in the days when the soybean industry was just getting started, and when growers needed all possible protection. In the meantime we have fought a war, have changed from a debtor to a creditor nation, and have expanded our soybean industry from a few million bushels to the 300 million bushel level.

Now the Experiment Station in Ontario, Canada, has come up with a variety of soybeans which growers in the areas adjacent to the Great Lakes find very interesting. But when they inquire about importing seed from the growers in Ontario they immediately are confronted with the $1.20-per-bushel duty. So, instead of protecting American farmers the duty, in this case, imposes an additional expense on the buyer of the seed.

Attempts are being made to lift the duty on certified or registered soybean seed. Whether or not the attempts are successful we have learned a lesson in the building of tariff walls. They do not scale easily from either side!

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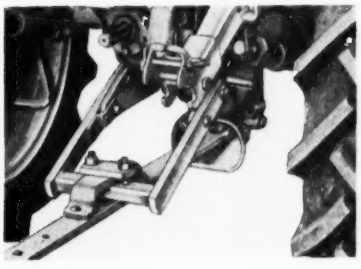

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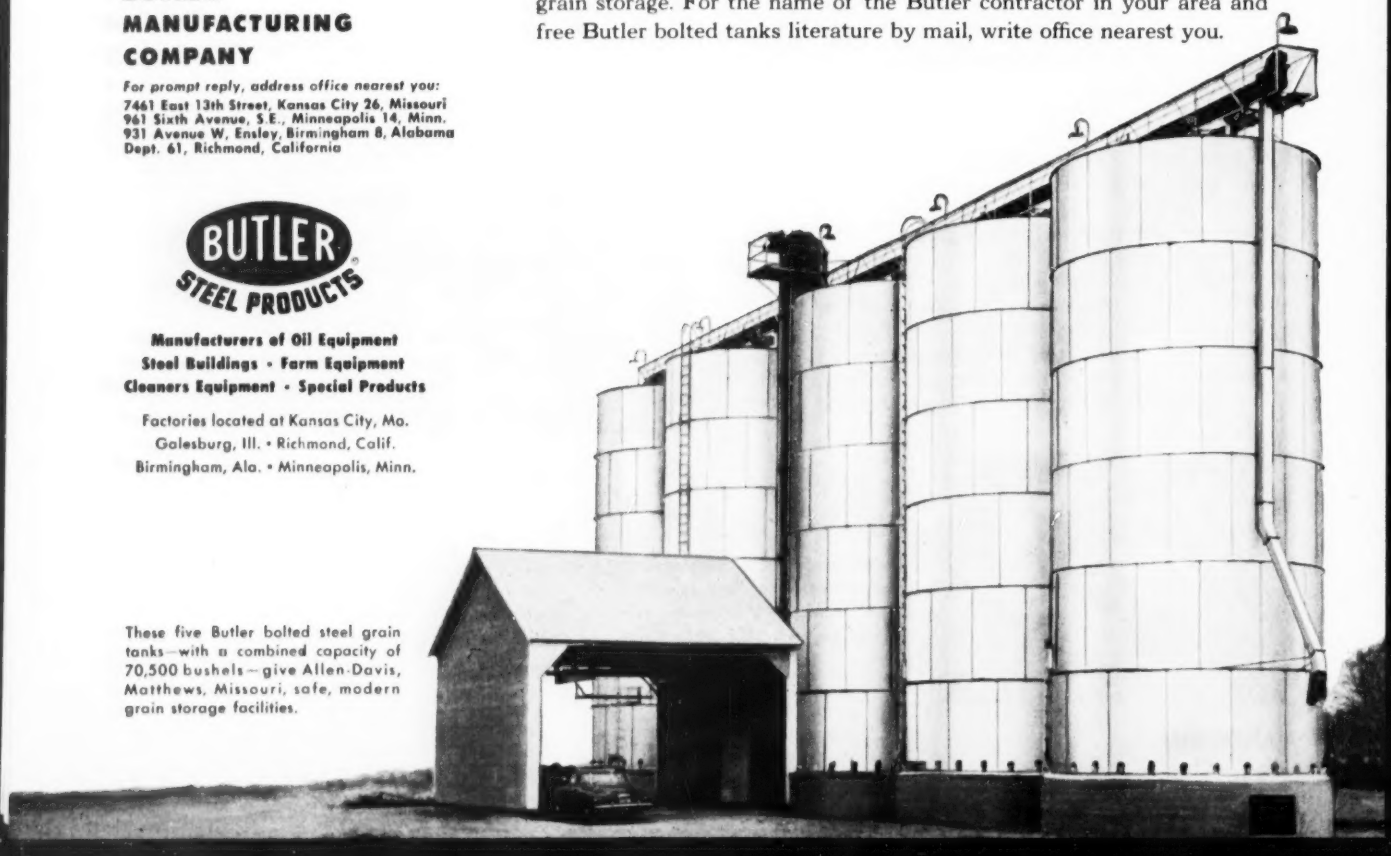

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AMERICAN SOYBEAN ASSOCIATION

# Late News

Hudson, Iowa, Mar. 10, 1954

Published 32 times yearly as a service to the soybean industry.

## SOYBEAN SUPPLIES

USDA officials are now estimating soybean exports this season at 40 million bushels, for work-sheet purposes. **This is 5 million bushels higher than previous official estimates.** Well over 30 million are believed to have been shipped already.

This, on top of Bureau of Census reports showing that about 88 million bushels have been crushed so far this season, strengthens the "statistical position" of the soybean market, which has pushed to new five-year highs in recent weeks.

The 88-million-bushel figure counts an estimated 5 million crushed prior to the beginning of the Oct. 1 marketing year. Allowing 30 million bushels for feed, seed and carry-over, the balance remaining for crushing Feb. 1 would be a little more than 114 million bushels **—only slightly more than 14 million a month for the rest of the season, compared to over 20 million bushels a month so far this season.**

Some men in the trade question whether the present market prices can be sustained. The possibility of unfavorable government action toward soybeans in its cottonseed and butter programs cannot be overlooked. But others point out that present supplies will be exhausted well before the end of the current processing season. **They question whether a larger soybean crop in 1954, if it materializes, can drive down prices much early next fall before supply lines are filled up; and do not look for the low point in next year's market to come before the first of the year.**

Processors in most northern areas are operating at capacity or close to it. They are operating largely on other crops in the South. Feed demand is reported good to strong most places, **with only spotted resistance to higher prices.**

## BUTTER DISPOSAL

Though details of USDA's plans for surplus butter disposal are hush-hush (see page 38), it's apparent that officials are counting on moving a considerable volume into export channels at reduced prices.

At a recent press conference, Secretary of Agriculture Benson said the possibility of exports was being reconsidered and the Administration might even consider selling some of the surplus to iron curtain countries. **Secretary Benson seemed to feel that consumer reaction to low-price export sales would be favorable if the same lower price were offered to U. S. housewives at the same time.**

The American Soybean Association has again reminded Benson of its opposition to sales of surplus butter at cut rates. (See page 10.)

Commodity Credit Corp. has announced its holdings of surplus commodities available for sale during March: Soybeans, 199,155 bushels; cottonseed oil, 935 million pounds; creamery butter, 270 million pounds.

**COUNTRY MOVEMENT**

Recent higher soybean prices have brought out more beans, especially from Minnesota and Iowa. A high percentage of remaining stocks have been sold from south central Minnesota points. Apparently 20 percent of 1953 stocks still remain in north central and western Iowa. **Illinois, Indiana and Ohio processors have been paying a premium for these beans.** About half of the 12 million bushels of Iowa beans under governmental loan have been redeemed.

**OUTLOOK FOR SEED**

**Germination of soybean seed in Illinois is averaging only about 71 percent,** an average of all tests run at the Illinois Crop Improvement laboratory shows, according to Mrs. Berniece R. Michaels. This is lower than at any time since soybeans were first grown as a cash crop in the Midwest. As a result standards set for germination of certified seed in that state will have to be lowered, she says.

It is obvious many farmers will have to depend on below standard seed to plant the 1954 crop, and if they plant at usual rates there will be poor stands.

We have reports of better seed germination from northern Iowa, southern Minnesota and Ontario. **Gilles DePutter, Appin, Ontario, says Middlesex County has a surplus of good seed which would be exported except for the U. S. tariff.** (See editorial discussion page 4.)

Otto B. Langfelder, Illinois Soy Products Co., Springfield, Ill., says Missouri and Iowa truckers have been scouring his area trying to buy good seed beans. Missouri truckers have been in Iowa.

**ACREAGE OUTLOOK**

There is no definite indication yet that the 80-percent price support on the 1954 crop is affecting the acreage outlook. The present high price is bound to count and **the market at planting time may have more effect than the support level.** Most sections expect an increase in acres—10 to 20 percent in the Cornbelt and up to 75 or 100 percent in a few southern localities. Nebraska acreage may be doubled. But a shortage of good seed will definitely limit any expansion in some areas.

**MOISTURE SUPPLIES**

Moisture conditions have improved in western Iowa and much of the South. But it is still dry in north central Iowa and south central Minnesota. Illinois and Indiana still report very dry conditions.

| | Cash price to farmers for No.1 soybeans Mar. 2 | Cash price to farmers for No. 2 soybeans Mar. 2 | Retail cash price for bagged soybean oil meal Mar. 2 |
|---|---|---|---|
| Ark. | | $2.85 @ $3.10 | |
| Ga. | | 2.95 @ 3.00 | $100 @ $110 |
| Ill. | $3.32 | 3.26 @ 3.30 | 99 |
| Ind. | 3.26 @ $3.38 | 3.36 | 84 @ 110 |
| Iowa | 3.12 @ 3.15½ | | 95 @ 102 |
| La. | 3.00 | 3.00 | |
| Minn. | | 3.07 | 102 |
| Mo. | 3.10 | 3.05 | |
| N. C. | 3.00 | 2.75 @ 3.12 | 90 @ 100 |
| Tenn. | 3.10 | | 90 |
| Va. | 3.15 | | |
| Ontario | 3.15 | 3.12 | |

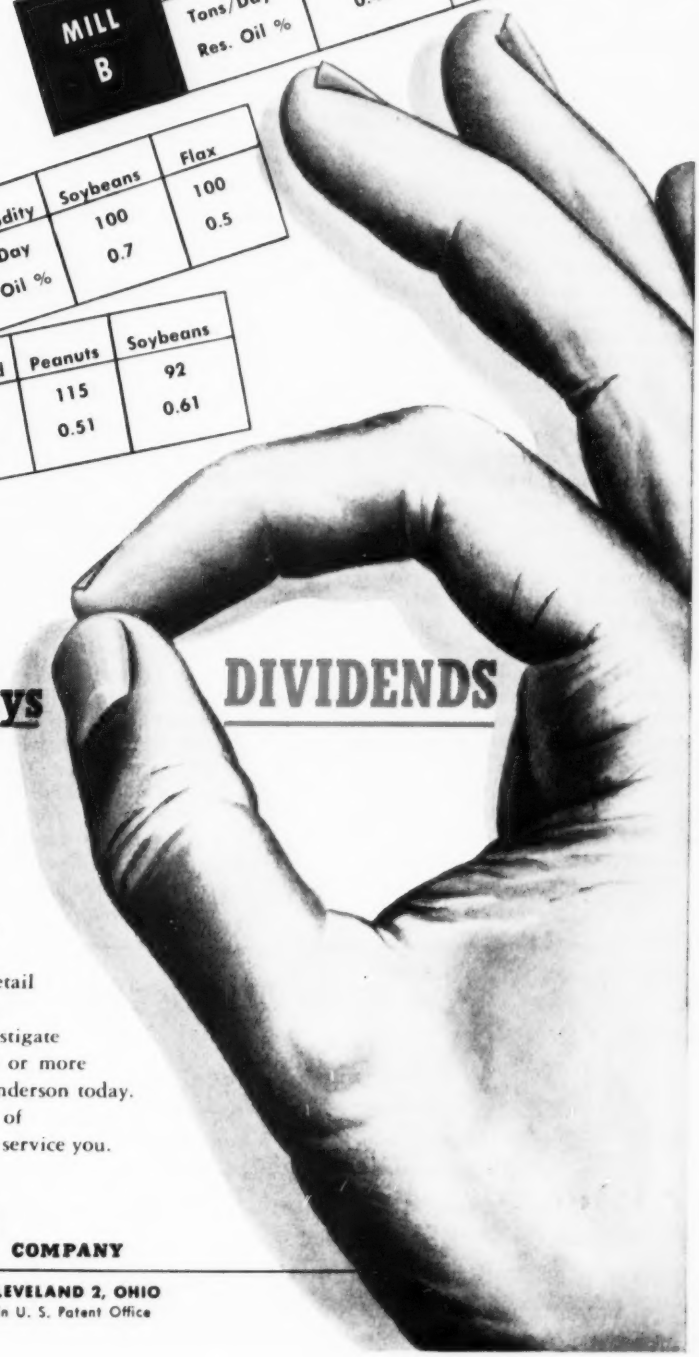
# When You Get RESULTS Like These...

| MILL A | Commodity | Soybeans | Cottonseed |
|---|---|---|---|
| | Tons/Day | 192 | 307 |
| | Res. Oil % | 0.62 | 0.3 |

| MILL B | Commodity | Cottonseed | Peanuts |
|---|---|---|---|
| | Tons/Day | 180 | 115 |
| | Res. Oil % | 0.45 | 0.53 |

| MILL C | Commodity | Soybeans | Flax |
|---|---|---|---|
| | Tons/Day | 100 | 100 |
| | Res. Oil % | 0.7 | 0.5 |

| MILL D | Commodity | Cottonseed | Peanuts | Soybeans |
|---|---|---|---|---|
| | Tons/Day | 180 | 115 | 92 |
| | Res. Oil % | 0.47 | 0.51 | 0.61 |



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# ACTIVITIES OF YOUR ASSOCIATION

**REGIONALS.** First steps were taken toward organizing two local soybean groups in Arkansas to be affiliated with the American Soybean Association, in late February meetings in which ASA President Jake Hartz, Jr., and Secretary Geo. M. Strayer took part.

Hartz presided at a meeting at Stuttgart Feb. 25 where a nine-man committee was appointed to set up a three-county soybean organization. Counties included are Monroe, Arkansas and Prairie. The committee will proceed to draw up a constitution and by-laws and otherwise activate the new organization.

Paul C. Hughes, Farmers Soybean Corp., Blytheville, presided at a meeting at Blytheville Feb. 26. A committee here was appointed to make preliminary plans for an Arkansas Delta area soybean organization. A larger meeting for producers of the area will be held before the organization is completed.

For some months promotional plans of the American Soybean Association have been moving along two separate fronts.

The first consisted of local grower meetings called directly by the Association. In these meetings growers were invited to join the Association and take direct part in formulating its program. A number of such meetings have been held last fall and this winter in Illinois, Indiana and Ohio.

But many producers have also felt that regional soybean associations affiliated with ASA would serve a vital purpose in meeting their problems. Each of the heavy-soybean-producing areas has certain peculiar problems that must be solved locally.

As an example, the rice lands of Arkansas need research on irrigation of soybeans. Arkansas also has problems of insect control and freight rates peculiar to the area.

It was to solve these and similar problems that interested Arkansas producers met with Strayer and Hartz Feb. 25 and 26 and took steps to set up local organizations.

**SHIPPERS.** A committee of soybean shippers from the Missouri-Arkansas-Mississippi area met with ASA President Jake Hartz Jr. and Secretary Geo. M. Strayer in Memphis Feb. 23 for a discussion of soybean grades and the present schedule of discounts for foreign material as applied to soybeans shipped to New Orleans for export.

Shippers claim the present schedule results in injustices. They plan another meeting in Memphis in the near future when all shippers in the general area will be invited to attend.

**BUTTER.** Secretary of Agriculture Benson has been urged by ASA Secretary Geo. M. Strayer to call a conference with the vegetable oil industry representatives before putting into effect any surplus butter disposal plan that might react unfavorably on the market for soybean and other oils.

As the Digest went to press there had been no announcement of a butter disposal plan following Benson's announcement that the price support on butterfat would be lowered to 75 percent of parity. But it is expected that one will be announced early this spring. Sales at cut rates of part of the surplus in the domestic market appear to be included (see page 38 for more information).

Strayer and representatives of other soybean and vegetable oil groups are strongly opposing any action that may drive margarine out of the market and jeopardize the position of soybean and other oils, both to the Department of Agriculture and the agricultural committees in Congress.

Last fall the ASA board went on record as being opposed to sale of Commodity Credit Corp. butter stocks in the domestic market for less than current market price.

—sbd—

## FORD EXPANDS TRACTOR UNIT

FORMATION of an expanded tractor and implement division was announced as a major step forward in Ford Motor Co.'s program to enlarge its activities in the farm machinery market.

J. R. Davis, vice president and group executive, described the new organization as a "completely integrated division with responsibility for manufacturing, research and engineering as well as distribution and sales." The tractor and implement division will incorporate all the functions of the former Ford tractor division.

Responsibility for tractor manufacturing will be transferred to this division.

Simultaneously, Mr. Davis announced the resignation of Thomas A. Farrell, vice president and general manager of the tractor division.

Irving A. Duffy, vice president of purchasing and a member of the company's board of directors, has been appointed vice president and general manager of the new tractor and implement division.

Establishment of the integrated division is the latest development in the decentralization program begun by Ford in 1946.

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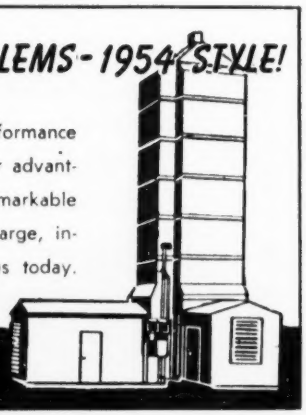

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# Canadian, Indiana, Iowa Champions

**CANADA.** Two brothers won the world's soybean championship at the Royal Agricultural Winter Fair in Toronto this year.

Photo shows Ivan M. Roberts (center), director of agronomy, Victory Mills, Ltd., presenting the Fair's championship trophy, a sterling silver engraved tray and a $100 check to Cornelius (Case) DePutter (left) and Gilles DePutter, Appin, Ontario.

The DePutters won the championship with the Hardome variety which was developed and introduced in 1952 by the Central Experimental Station at Harrow, Ontario. Hardome is an early maturing variety comparable to Capitol maturity. In early tests Hardome has shown outstanding yielding ability, pods high off the ground and in general is a variety that growers will be hearing a lot about in the future.

The DePutters came to Canada from Holland in 1923. They bought a small farm that they have built into a 500-acre unit looked upon as one of the better-managed farms in the Appin area.

For years they have taken a great interest in soybeans. Gilles DePutter is vice chairman of the Ontario Soya Bean Growers' Marketing Board and Canadian director of the American Soybean Association. The brothers have entered soybean varieties at the Royal for some years.

## GROWERS

**INDIANA.** Charles Maddox, Benton County farmer, is the 1953 Indiana Corn Growers Association soybean yield champion, according to an announcement made by Keller Beeson, Purdue University extension agronomist and secretary of the Corn Growers Association, Lafayette.

Mr. Maddox, who grew 48.2 bushels of Hawkeye soybeans per acre, topped some 68 soybean growers from 16 counties for the championship. He planted his beans in 38-inch rows on May 21 and cultivated them three times.

Benton County, a heavy soybean growing area, had failed to win a yield championship since 1940 when John Leuck won the contest in its initial year.

The four highest yields in 1953 were in Benton County. In addition to Mr. Maddox, other top winners in order were Oley Robinson with 44.9 bushels per acre; Harlan Parr with 44 bushels per acre, and Vernon Deno with 43 bushels per acre.

Other high yields were Wilbur Kron, Vanderburgh County, 42.4 bushels per acre; Henry Preiser, Cass County, 42.3 bushels; Gene Connor, Benton County, 41.8 bushels; and Norbert Stohl, Vanderburgh County, 41.7 bushels.

Two men tied for ninth place with yields of 41.5 bushels per acre. They were Paul Preiser, Cass County, and Ernest Bushy, Madison County.

Others who had yields over 40 bushels per acre were Dwight Sewell, Benton County, 40.5 bushels per acre; Jim Benner, Benton County, 40.1 bushels; and Paul Yegerlehner, Clay County, 40.1 bushels.

Nearly half the growers in the contest used the Hawkeye variety. The favorite variety in the east and central part of the state was Lincoln while Wabash and Perry were used by southern Indiana growers.

Limited amounts of fertilizer were used by all contestants. Mr. Beeson points out that high yields resulted from superior rotation and fertility practices.

**IOWA.** Winner of the Iowa master soybean grower's contest for 1953 was Revialo Rex of Boone. Rex produced 54.02 bushels per acre, using Hawkeye soybeans, on the required two-acre plot.

Under the rules of the contest, an area of two or more acres is harvested, weighed and corrected to 14 percent moisture. The harvested beans must qualify under the requirements of No. 2 market grade.

Mr. Rex used a high planting rate and heavy application of barnyard manure to obtain his high yield. He planted two bushels per acre, used a shortened marker to get rows alternately 30 and 40 inches apart.

His contest winning field was planted May 13 on a well-prepared seedbed which had been plowed, double-

**INDIANA CHAMP.** Charles Maddox (left) receives medal, certificate and ribbon for his high five-acre soybean yield that won the Indiana yield championship from Dr. F. L. Hovde, Purdue University president.

**IOWA CHAMP.** Revialo Rex, Iowa soybean champion, receives John Sand trophy from Dr. I. J. Johnson of the Iowa State College agronomy department and chairman of the contest committee.

disked twice and harrowed twice. The growing beans were cultivated twice with a rotary hoe and once with a regular cultivator using weeder attachments.

Second place in the contest went to Harold Yanney of Renwick, with a yield of 53.16 bushels per acre using Adams soybeans. In direct contrast to the contest winner, Mr. Yanney used an exceptionally low planting rate of only 40 pounds of beans per acre. Like Rex, he used good weed control and plenty of barnyard manure to get his high yield.

Mr. Yanney is partial to soybeans on his 515-acre farm to the extent that he annually plants approximately 20 percent of his total acreage to soybeans.

In addition to the contest field of Adams, Mr. Yanney had an acreage of Hawkeye which went 42 bushels per acre and a field of Blackhawk which yielded 36 bushels per acre.

While weather conditions were not favorable for soybean production in Iowa during the 1953 growing season, the yields rank high in contest history. Last year's winning yield of 60.78 bushels per acre, produced by Molgaard Brothers (Adolph and Henry) of Bouton is the only yield in the records which ranks higher.

Moisture was very short during 1953, especially during August and September. As a result, the beans ripened quickly and, in most cases, were too dry when harvested.

Forty-eight contestants from eight local contests participated in the contest. Of these, 35 entries from seven contests were eligible for state awards.

**FERTILIZERS.** A fertilizer program on all seed fields including soybeans is followed by Russell's Seed Farm near Muncie, Ind., with good results, Orville C. Russell reports.

"Our soils are about equally divided between black loam with deep blue clay subsoil and a white clay underlaid with yellow clay and under the highest elevations at a depth of two to two and one-half feet a tight water-resistant hard pan or in small areas gravel deposits," he says.

"About 10 years ago soil tests were run and three tons of high grade limestone were spread on all our crop acres.

"Because our program is producing high quality farm seeds, we have been plowing under 500 to 600 pounds of 12-12-12 fertilizer on all seed fields, and the following year planting to soys and using 150 to 200 pounds of 0-20-20 fertilizer in the row.

"While we have not produced any exciting yields we have noticed the following results: Healthy, vigorous growing plants, more even maturity by row fertilization which we find contributes to higher germination, and affords the opportunity of combining when a larger percent of the beans are ready. However, increased yields will just about pay for row fertilizer costs."

Mr. Russell grows Lincoln, Hawkeye and Kingwa. "Since the Hawkeye variety was released our yields have gradually increased from around 32 to 35 bushels to 38 to 42 bushels per acre.

"We are deeply concerned about using every known practice to improve soil texture by deep plowing and growing and maintaining plenty of humus. This we have found is about as important as the use of fertilizers. At least, it seems to be a contributing factor in helping the bean plant utilize its necessary requirements of plant food."

**SEED.** That date of planting may have an effect on the quality of the resulting seed crop is a fact that may have escaped the average producer.

In the South many farmers have been planting soybeans in April. But Dr. E. E. Hartwig, agronomist at the Delta Experiment Station, Stoneville, Miss., has determined that not only higher yields but better seed quality are obtained when planting is delayed until May. He recommends that seed should be selected from plantings made after May 1 in


INOCULATE SOY BEANS

with

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Superior Legume Inoculator

IT PAYS

The Urbana Laboratories

Urbana, Illinois

that area, as reported on page 15 of the February Soybean Digest.

"It is a general rule, especially with varieties that are early for a locality, that delayed planting gives better seed quality," according to J. L. Cartter, director of the U. S. Regional Soybean Laboratory at Urbana, Ill. "This is because when a variety that is normally too early for a particular area is planted at an early date it tends to mature in the late summer or early fall when the temperatures are warm and the air is humid. If the same variety is planted later in the spring, it will mature somewhat later in the fall when the temperatures are cooler and more favorable for good seed quality. Date of planting does not have so much effect on the date of maturity of full-season or late varieties."

**INOCULATION.** Don't underestimate the value of inoculating your soybean seed.

O. H. Sears, University of Illinois agronomist, says that's especially true on ground where you are planting soybeans for the first time.

Planting inoculated seed there may even double the yield over what you might get if you planted seed that had not been inoculated.

Even on ground where soybeans have been grown before, inoculation is good, cheap insurance for top yields. You can inoculate for as little as 10 cents an acre.

Most important thing about inoculating soybeans is to be sure each seed gets some of the inoculant. You can mix some inoculants with water, but that is not necessary with the humus type.

To be sure the seed and inoculant are mixed well enough, mix them until you think you've done a good job. Then mix them that much more, Mr. Sears suggests.

It's a good idea to insure a good mix by preparing your seed before you go to the field. Don't try to do the job in the planter box, because your seed will not be thoroughly inoculated.

**COSTS.** Costs of producing soybeans rose 120 percent during the period between 1942 and 1952, according to central Illinois farm records as reported by Roy Wilcox, University of Illinois farm economist. Prices rose 96 percent during the same period, Mr. Wilcox says.

Even so, profits on these farms in 1952 were $37 an acre with soybeans compared with $21 an acre in 1942. Yields per acre were practically the same in the two periods.

Here are the soybean figures from the Springfield, Ill., area for 1952 and from the Champaign-Piatt area for 1942: Cost per acre in 1952 was $46, profit was $37.28; cost in 1942, $20.90, and profit, $20.66.

Price per bushel when soybeans were being combined in 1952 was $2.80; and in 1942, $1.43.

**BEANS, COTTON.** The regular crop rotation of cotton one year, soybeans the next pays, according to the experience of W. G. Fox on his 60-acre farm near Indianola, Miss., as reported in Delta Farm Press.

"Soybeans are a much cheaper fertilizer than anything you can buy," he declares.

The only fertilizer Mr. Fox applied to his 16 acres of cotton last year was 150 pounds nitrate of soda as side dressing. Thirteen of these acres received 270 pounds per acre of cyanamid in the fall of 1952. He produced a bale and one-half on each acre of his cotton last year.

Most of the acres where cotton grew in 1953 will be planted to soybeans in 1954.


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# FERTILIZING SOYBEANS

**REPRESENTATIVE** soybean plants from soil receiving: (left) lime, phosphate and potash; (center) lime and phosphate; (right) lime. Missouri tests.


**By J. W. CALLAND**

National Soybean Crop Improvement Council



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A SOYBEAN grower asks, "Why do we so often hear it said, 'It doesn't pay to fertilize soybeans?' They tell us: (1) put the fertilizer on wheat, on corn, on oats or on some other crop where it will pay better, but don't apply fertilizer to soybeans, or (2) probably the best fertility treatment for soybeans is a good crop rotation that includes a legume, or (3) soybeans don't respond to fertilizer."

Then he continues, "These statements bother me because I want to plant 80 acres of soybeans this spring and I want to get 30 to 40 bushels per acre, not 15 bushels like the former owner was getting. Why do I have to start building up the fertility of this farm with other crops? Why can't I start with soybeans?"

Well, of course, he can start with

**Table 1. Effect of Supplemental Fertilizer Plowed Under for Corn on Crop Yields**

| Treatment | Average Yields bushels per acre | | |
|---|---|---|---|
| | Corn[1] 1942-1948 7 crops | Soybeans after the corn 1943-1948 6 crops | Wheat after the soybeans 1944-1948 5 crops |
| Basic [2] | 86.6 | 24.9 | 41.1 |
| Basic plus 400 lbs. 0-10-20 plowed under for corn | 95.7 | 28.9 | 41.2 |
| Increase for supplemental fertilizer | 9.1 | 4.0 | 0.1 |

[1]Corn followed red clover in 1942 and 1943, and sweet clover intercrop thereafter. [2]Basic fertilizer: 100 pounds 0-12-12 near hill for corn; 300 pounds 3-12-12 drilled with seed plus 20 pounds nitrogen top dressed in spring for wheat.

**Table 2. Effect of Supplemental Fertilizer Plowed Under for Soybeans on Crop Yields**

| Treatment | Average Yields bushels per acre | | |
|---|---|---|---|
| | Soybeans 1942-1948 7 crops | Wheat after the soybeans 1943-1948 6 crops | Corn after the wheat[1] 1944-1948 5 crops |
| Basic [2] | 24.8 | 39.3 | 87.6 |
| Basic plus 400 lbs. 0-10-20 plowed under for soybeans | 30.8 | 40.1 | 95.9 |
| Increase for supplemental fertilizer | 6.0 | 0.8 | 8.3 |

[1]Sweet clover seeded in wheat as an intercrop for corn. [2]Same as Table 1.

**Table 3. Effect of Supplemental Fertilizer Topdressed for Wheat on Crop Yields**

| Treatment | Average Yields bushels per acre | | |
|---|---|---|---|
| | Wheat 1943-1948 6 crops | Corn after the wheat[1] 1944-48 5 crops | Soybeans after the corn 1945-48 4 crops |
| Basic [2] | 39.3 | 87.6 | 28.3 |
| Basic plus 400 lbs. 0-10-20 topdressed on wheat in spring | 43.1 | 98.2 | 31.5 |
| Increase for supplemental fertilizer | 3.8 | 10.6 | 3.3 |

[1]Same as in Table 2. [2]Same as in Table 1.

## A summary of fertilizer practices in all the leading soybean states

soybeans and they should be fertilized. In fact, soybeans are an excellent crop for him to start with.

But what about the above recommendations? They are partly right. They make sense but only under certain conditions. They are no good for growers like the one above who are seeking information on fertilizing soybeans they want to plant this year. Particularly, they are out if the field is of low fertility, needs lime and fertilizer as his apparently does, but more about recommendations later.

Trying for a comprehensive picture of how to fertilize the soybean crop, I asked agronomists from the 18 principal soybean growing states for factual information covering results of experiments and tests they have conducted on different soils, under different rotations, and over periods of years, and also for their current recommendations for fertilizing soybeans. I shall try to summarize briefly their findings and recommendations.

To begin with, in most of these 18 soybean states very little experimental work on fertilizing soybeans has ever been done. Probably the two principal reasons for this are (1) soybeans are a relatively new crop, and (2) they generally have not given as good returns from the usual applications of fertilizers as have other crops. So, it has been easy to say, "Put the fertilizer on the other crops and let soybeans shift for themselves." This attitude also emphasizes the fact that we still have a lot to learn about the physiology and nutrition of the soybean plant.

However, considerable experimental work and a great number of tests have been conducted in four or five of the leading soybean states. The usual fertilizer recommendations for soybeans over most of the soybean growing areas, are generally based on the results of tests in these few states.

### Millions of Acres Need Fertilizing

What are some of the conditions where soybeans should be fertilized? Let's start with Illinois which is by far the largest producer of soybeans. F. C. Bauer, A. L. Lang, and P. E. Johnson, speaking for Illinois agronomists, say that on the potash deficient soils of southern Illinois, on the high lime areas, and on the sandy soils of the state, which together total close to one-half of the area of Illinois, fertility is definitely needed. Proper applications of the needed lime and potash for the soybean crop on these soils will usually double the yield, provided, of course, that the field has not already received the needed treatments.

Probably not over 15 to 20 percent of the fields comprising these three groups have yet received the required lime and fertilizer treatments. This means that on most of the 7 to 8 million acres of Illinois crop land the yield of soybeans could be raised from 10 to 15 bushels to 25 to 30 bushels per acre just by giving this land the needed lime and potash.

Here is the procedure they recommend:

1—Get a good soil test made of the field.

2—Spread the required amounts of lime and potash on the plowed ground and disk it in, or it can just as well be plowed down if the soybeans are not being followed with wheat.

Neither phosphorus nor nitrogen has increased soybeans very much on these Illinois soils. Corn will respond to nitrogen and wheat to phosphorus. Therefore, to build up productivity for all of the crops in a good rotation LNPK all will be needed. But to step up soybean yields lime and potash are the most important requirements. Four to six tons of limestone and around 200 pounds of muriate of 50 to 60 percent potash are usually required to supply the needs of these soils.

Robert Beam of Newton, Ill., started a check in 1943 on a 25-acre field of soybeans which made 10 bushels per acre. Four tons of lime in 1944 raised the yield to 12 bushels, 300 pounds of 0-12-12 added in 1945 raised the yield by 13 bushels, up to 25 bushels per acre. Over the six-year period 1946-1952 with 300 pounds of 0-12-12 annually this field has produced from 26 to 29 bushels per acre.

John Wolf of Wheeler, Ill., reports soybean yield increases of 15 bushels per acre from applications of limestone and fertilizer on his farm. He says that many good soybean growers in his area have been able to raise soybean yields from 10 to 15 bushels up to 25 to 34 bushels per acre during the past five to eight years by proper applications of lime and fertilizer. Lime and potash alone have doubled the yields on many fields.

On the high fertility soils of Illinois, where the nutritive requirements for top yields of other crops have been met, soybeans usually fail to show any response to direct applications of fertilizer. Here, the agronomists say to put on enough fertilizer during the rotation to maintain top production of all the crops. Since some of the other crops respond better than soybeans to these applications, they say to put the fertilizer on these other crops.

R. R. Mulvey, speaking for the agronomists at Purdue, says they go along with the above recommendations for the better soils in Indiana, provided the other crops are fertilized adequately. But he points out that the other crops, however, are not generally fertilized adequately and in such cases supplemental fertilizer applied to the soybean crop is recommended.

The tables on page 16 show the comparative effects on crop yields of supplemental fertilizer, 400 pounds of 0-10-20 (1) plowed under for corn; (2) plowed under for soybeans; (3) side-dressed on wheat. The land in each case received a basic fertilizer treatment of 100 pounds of 0-12-12 near the hill for corn, 300 pounds of 3-12-12 drilled with the wheat, and 20 pounds of nitrogen top-dressed in the spring. In these seven-year tests where the basic treatment was not enough it was more important to add supplemental fertilizer to the soybeans than to either of the other two crops during the first round of the rotation. The yield of the soybeans was increased six bushels per acre and maturity was speeded up by as much as two weeks.

Mulvey says that legumes in the rotation are helpful to soybeans only

**FERTILIZED** and unfertilized soybeans on Newton field, Illinois, 1950. Yields, unfertilized 12 bushels; fertilized 29 bushels.

where they are managed in such a way as to add maximum organic matter to the soil. Simply including a legume in the rotation will not help soybean yields.

Mulvey points out that most of the cropped land in Indiana requires 30 pounds of $P_2O_5$ and 30 pounds of $K_2O$ per acre of high crop yields. These amounts need not be applied for each crop. Usually sufficient amounts should be applied to the corn and small grain to take care of the other crops in the rotation. Farmers applying materially less than the average amounts should apply fertilizer in the row for soybeans. On Brookston-Crosby soils of central Indiana, where only moderate amounts of fertilizer have been applied for corn and small grain, Purdue has found it quite profitable in its experiments to apply 100 pounds of 0-10-20 near the seed with the fertilizer attachment of a corn planter equipped with a divider to place the fertilizer on both sides of the seed.

Mulvey says they encourage their farmers to apply fertilizer according to the needs of their soil as shown by the Purdue Soil Testing Laboratory. Recent estimates indicate that soybeans occupying 16 percent of the Indiana crop acreage, exclusive of pasture, receive 8 percent of the phosphate and 10 percent of the potash used in the state.

Purdue offers these general recommendations for fertilizing soybeans:

1—On soils extremely deficient in phosphorus or potassium, yields are often doubled and maturity hastened two or three weeks by applying 500 pounds of 0-9-27 or 0-10-20 fertilizer per acre broadcast and plowed under.

2—For applying fertilizer in the row at time of seeding reduce the rate to 150 pounds per acre.

To avoid damage to the seed it is safer to use 0-12-12 rather than a fertilizer higher in potassium at time of seeding in row. The fertilizer should not be in direct contact with the rows. Around 100 pounds of 0-20-20 fertilizer can be applied directly in seven-inch rows with the grain drill without injuring the stand.

H. J. Mederski, reporting for Ohio, says that it usually does not pay to fertilize soybeans on the dark soils of the western part of the state, but on the gray soil groups and on other low-fertility soils soybeans should be fertilized. He says that, in general, where yields are below 20 bushels per acre an application of 200 pounds of 0-12-12 should be applied before planting.

Mederski says that on very low fertility fields where without fertilizer

**PLOT** on left side received lime and fertilizer. Beans on right got no treatment.

yields are 15 bushels or less, a safe rule to follow would be to use a complete fertilizer, such as 3-12-12 or 5-10-10. In addition, 60 pounds of nitrogen side-dressed on at the start of flowering should, in many cases, help to boost soybean yields.

For Iowa W. H. Pierre and J. T. Pesek say that the best guide at present to determine whether or not to fertilize soybeans in that state is soil testing. They say that soils very low in either phosphorus or potash should receive fertilizer directly to the soybean crop. Their tests indicate that about one-fourth of the total soybean fields in Iowa need fertilizer. Also, soils deficient in iron need applications of ferrous sulfate.

Missouri agronomists say:

1—Add lime if needed.

2—Unless liberal fertilizer applications have been applied to the crops immediately preceding, mineral fertilizers should be applied to soybeans.

They say fertilizer on soybeans gives good returns on the light-colored soils of northeast and southwest Missouri, on the dark-colored soils of average fertility in northwest Missouri, and also, in many cases, on the more fertile dark-colored soils of the state. They recommend such brands as 0-12-12, 0-20-20, 0-10-20, etc.

For Michigan R. L. Cook says they recommend for soybeans from 150 to 300 pounds of 1-16-8, 1-16-1, or 3-12-12, according to soil tests, on silt or clay loam soils such as Miami. For Brookston and similar soils the same application with an additional application of 30 pounds of manganese sulfate mixed with the fertilizer is recommended. On the medium sandy soils, such as Hillsdale and Fox, they recommend 150 to 300 pounds per acre of 3-12-12, 1-16-8, or 3-1-18, according to soil tests.

F. W. Smith, C. O. Rost, Donald Hanway, and N. L. Skold, speaking for Kansas, Minnesota, Nebraska, and Tennessee, say that, in general, direct applications of fertilizer to the soybean crop in their states have not been very successful, except in cases of potash-deficient soils. They definitely advocate soil-testing as an aid to fertilizer recommendations. Nebraska reports profitable gains from nitrogen applications to soybeans as side-dressing at early bud stage.

## Southern States

Experimental work in North Carolina, Georgia, Florida, Louisiana, and Arkansas shows that soybeans grown on the Coastal Plain soils respond quite profitably to direct fertilizer applications. Agronomists say that this is to be expected since these soils are of rather light texture, have been farmed for a long time, and are inherently lower in nutrients.

In general, the Delta soils of Mississippi, Missouri, Arkansas, and Louisiana have shown no response to fertilizers applied to the soybean crop. Cotton and corn generally respond only to nitrogen on these same soils.

However, E. E. Hartwig, who is in charge of soybean investigations for the Southern states, says that in cases where these Delta soils show the need of lime and minerals he has doubled the yield of soybeans with applications of lime, phosphate and potash. This indicates to him that soil tests are definitely in order on these soils where nitrogen is very frequently the limiting factor for nonleguminous plants. Hartwig says some of these soils will grow 50 bushels of soybeans with no treatment but will not grow 30 bushels of corn without nitrogen applications.

Virginia agronomists recommend for soybeans 300 to 400 pounds per acre of 0-14-14, 0-14-7, 0-10-20, or the equivalent in higher analysis fertilizer. They caution, however, that not more than 40 pounds of potash should be used in the row with the seed. If more is used they say to plow it down on all heavier soils. On very thin land they point out that 2-12-12 may give better results. Only on very fertile land or following heavily fertilized crops will fertilizer not be needed on soybeans in Virginia.

Ninety percent of North Carolina's 300,000-acre soybean crop is grown in the Coastal Plain. Here, potash is the principal nutrient limiting soybean yields. But, lime also must be added in most cases. Colwell, Nelson, and Hartwig, speaking for North Carolina, say applications of dolomitic limestone, as required, plus a

fertilizer application of 400 pounds of 0-10-20 has in many cases doubled the soybean yield and returned $4 for each $1 invested.

R. L. Beacher says Arkansas experiments show that applications equivalent to 350 pounds of 0-12-12 fertilizer on the rice and soybean soils of the Grand Prairie region gave increases of about 10 bushels per acre for soybeans. In general, Arkansas recommendations are: Apply a minimum of 400 pounds per acre of 0-14-7 or 0-12-12 fertilizer on soybeans on all major soil areas where the particular field is low in both phosphate and potash by soil test.

Beacher says, "Direct applications of fertilizer may give higher returns per dollar invested on certain other crops than on soybeans under some soil conditions, but that is poor justification for omitting fertilizer from soybeans. The best fertility program is by no means simply a good crop rotation; a good crop rotation is always desirable but it does not mean that nitrogen, phosphorus, potash, and other essential nutrients will be maintained or supplied at an adequate level for good soybean production. Soybeans should respond to lime and fertilization with phosphorus and/or potash on any soil which is very low in these elements as determined by soil test or other suitable means. Well over half of our state soybean acreage falls into this category and similar conditions are likely to exist in most other soybean producing states."

Much of the soybean crop in the Southeastern states, from Alabama around to South Carolina, is grown in a two-crop system of farming where the winter crop of potatoes, oats, etc., has been heavily fertilized. In these cases, soybeans frequently are not fertilized, but otherwise they respond quite profitably to direct applications of fertilizer.

## Nitrogen and Minor Elements

Experiments reported from Ohio, Nebraska, Michigan, and Iowa indicate that under certain conditions applications of nitrogen to soybeans may be profitable. However, reports from most of the soybean states say that nitrogen side-dressed applications just about pay for themselves. On fields where soybeans yield around 15 bushels per acre, because of low fertility, a complete fertilizer like 3-12-12 or 5-10-10 may be quite profitable.

Whenever soils are deficient in manganese or iron, applications of manganese sulfate or ferrous sulfate, either added to the fertilizer or sprayed on the soybean plants, may make the difference between a crop and a failure.

## To Fertilize Soybeans

1—Start with a good soil test.

2—On very fertile land or on land where the preceding crops have been heavily fertilized, it is not necessary to fertilize all the crops in the rotation in order to maintain top productivity. Since under these conditions some of the other crops give a greater response to a direct application of fertilizer than soybeans, apply the fertilizer to these other crops—but apply it!

3—If soil tests of the field in which you are going to plant soybeans show that it is deficient in lime or minerals, put on what it needs but don't put too much high potash fertilizer in direct contact with the seed. Of course it will pay. It always pays to fertilize the soil when it needs it. It always pays to maintain high productivity when you have attained it.

4—Naturally, there are a lot of other things in connection with a good soil fertility program like rotations, deep-rooted legumes, grasses, soil conservation, drainage, crop residues, manure, and all of the soil treatments necessary to bring the land up to top production. But, in the meantime, soybean farmers are losing millions of dollars annually by not adding to their soybean fields the nutrients that a soil test will show are needed.

When all the soybeans are fertilized that should be fertilized, the average yield of many states will be 30 bushels or better.

*(For further information on fertilizing soybeans in North Carolina turn to page 28.—*EDITOR.*)*

## SEED EXPERT DIES

Fred H. Hillman, 90, noted botanist and seed expert, died Feb. 8 at his residence in Washington, D. C.

A past president of the Association of Official Seed Analysts of North America, Mr. Hillman was author of more than 50 seed publications, many of which are in worldwide use.

At the time he joined the staff of the U. S. Department of Agriculture seed laboratory in 1901, seed technology was a completely new field, and he devoted a lifetime to place the identification of seeds on a sound scientific basis. His seed drawings, which are outstanding for clarity and botanical accuracy, may well be considered his most important contribution. He is perhaps best known among seed analysts for the photographic plates of these drawings, commonly known as the 15-plate set by Hillman and Henry.

—s b d—

## NEW ORLEANS EXPORTS

Total soybean exports from the Port of New Orleans came to 17,926,137 bushels during 1953, compared with 10,123,169 bushels during 1952, according to A. A. Clarkson, manager of the public grain elevator. This is an increase of 77 percent.

Barge receipts at New Orleans more than doubled during 1953, Clarkson said. A total of 1,544 bargeloads of soybeans were received, or 6,062,395 bushels. Railroads delivered 11,863,792 bushels from 7,127 cars, about 50 percent more than during 1952.


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# Price Relation Of Soybeans And Cottonseed

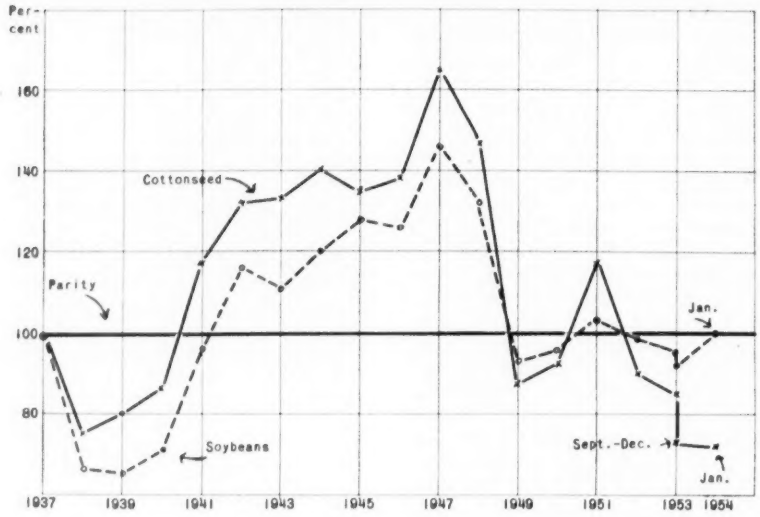
*(Prepared by Louis H. Bean of the Andreas Foundation)*

THESE two charts present the normal basic interrelationships between soybean and cottonseed prices and the abnormal one prevailing today. One chart shows that normally the market value of soybean products and cottonseed products go together except under very abnormal conditions affecting one of the component elements. For the entire period covering the crop seasons of 1935 to 1952, inclusive, the value of soybean products per pound has averaged about 106 percent of the value per pound of cottonseed products. The exceptional years were 1948-1950 and the current season.

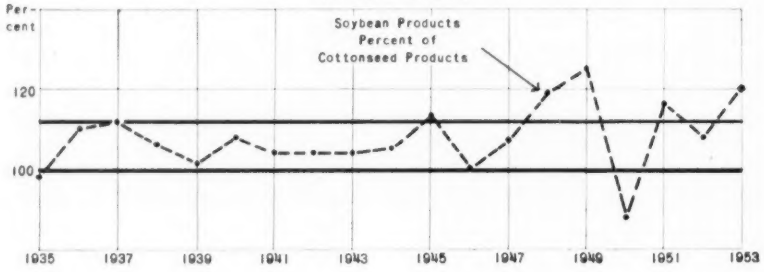
The fact that normally competition tends to keep the market values of the products of these two commodities in line is also reflected in the relation between the prices received by farmers for soybeans and for cottonseed. This is shown clearly by the top chart. The prices of the two commodities are here expressed as percentages of parity. Normally they move up and down together, with the cottonseed ratio to parity usually above that for soybeans.

Since the middle of 1953, however, a new situation has developed. The support price of cottonseed was reduced to 75 percent of parity before the 1953 soybean crop was made. Cottonseed prices have averaged somewhat below 75 percent since then. For January, 1954, the last point in the chart, it was 72 percent of parity. On the other hand the price of soybeans which, as a percent of parity, has been below cottonseed during the years 1938-1948, has remained close to the parity level. It dropped moderately with the drop in the cottonseed support price but later advanced as weather cut down the new crop. As of January, 1954, soybeans at parity and cottonseed at 72 percent of parity, the spread between the two is most unusual, with nothing like that situation for the past two decades. The extent to which this situation is related to the reduction in the support level for cottonseed is indicated by the two average prices shown for 1953, the lower average in each case being that for September-December, 1953, and the other the average for the first eight months of 1953.

PRICES RECEIVED BY FARMERS FOR SOYBEANS AND COTTONSEED
(As percent of parity)




RELATION OF VALUE OF SOYBEAN PRODUCTS (oil, meal) TO VALUE OF COTTONSEED PRODUCTS (oil, meal, hulls, linters)
(Per pound of seed)





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## THE COVER PICTURE

It is well known that pigs fed modern rations will far out-perform pigs fed the rations of bygone years. This is shown dramatically on our cover. The three pigs were fed typical rations of 1910, 1930 and 1953, and were from a demonstration at the University of Minnesota under the direction of L. E. Hanson.

The pigs, five sets of litter-mates, started even at weaning time last May. By mid-September, the 1953-fed pigs averaged 240 pounds, the 1930-fed hogs 161 pounds, and the 1910-fed hogs 118 pounds.

But perhaps many people do not stop to consider the extent to which the rise of modern rations has paralleled the entrance of soybean oil meal into hog rations. In fact, these modern hog rations would be impossible from a practical standpoint without soybean oil meal.

Laurence E. Carpenter of the Distillers Feed Research Council, Cincinnati, has listed the big historical developments in swine feeding as:

1—The addition of tankage.

2—The addition of alfalfa.

3—The trio mix perfected at Wisconsin.

4—The addition of soybean oil meal.

The 1910 ration fed the pig on the cover was composed of corn and minerals only. The 1930 ration reflected the addition of tankage.

But alfalfa and soybean oil meal as well as vitamin B-12 and antibiotics had been added to the 1953-type ration. It was the well known Minnesota supplement developed at the University and consisted of corn self fed and a protein supplement of:

- 41 lbs. soybean oil meal
- 20 lbs. tankage
- 10 lbs. linseed oil meal
- 25 lbs. dehydrated alfalfa meal (17% protein)
- 2 lbs. bone meal
- 2 lbs. trace element salt
- 2 mg. vitamin B-12
- 2 grams of antibiotics

Not only did the modern-fed pigs gain faster but they took less feed to gain weight. Up to 125 pounds, the 1910-fed animals averaged 5 2 3 pounds of feed to put on 100 pounds weight; the 1930 animals, 3 6 4 pounds; and the 1953 hogs, 297 pounds.

Photo is courtesy Minnesota extension service.


# America and its railroads grew big and strong together

**COVERED WAGONS** carried the early American settlers in search of new homesteads. Land was cheap, but markets were few and far. The cost of moving a ton of freight averaged about 20¢ a mile.

**HARD ON THE HEELS** of the covered wagon came the railroads . . . grangers all. They were the touchstone that changed prairie trading posts into thriving market places, and frontier settlements into prosperous agricultural communities. Shipping charges were cut in half, later to be halved again and again. Today the railroads' average revenue per ton-mile is less than 1½¢.

# ...AND THEY'RE BOTH STILL GROWING!

During the last century America grew fast – and so did its railroads!

Agriculture flourished in vast new territory as railroads provided the means of moving the harvest to distant markets. New sources of raw materials were discovered – it took the railroads to get them where they were needed. New and better ways of making goods were developed – the railroads carried the products of growing industries to the eager consumers.

In 1954 America's railroads are still growing in strength – still setting new records of efficiency in their service. Today railroads haul more goods, more miles than all other forms of transportation combined. And their average charge is lower than that of any other form of general transportation. Yes, this railroad record is one big assurance that, in the future, America will be stronger, more productive and more prosperous than ever!

**ASSOCIATION OF AMERICAN RAILROADS**

WASHINGTON 6, D. C.

**STORAGE** bins of Kennedy Grain Elevator at Newton, Ill., have storage capacity of 160,000 bushels, were built in 1951 to accommodate soybean crop in the area.

# Soybeans Move South In Illinois

*(Staff Written)*

FERTILIZERS and soybeans have brought about a revolution in the farming of southern Illinois the past 10 years.

Maybe we throw the word "revolution" around a little too freely. But how else would you describe the change that has taken place?

Back in the early 1940's this was a redtop and timothy area. Much of the land lay idle and the average annual farm gross was perhaps $1,200. Now 40-bushel soybean yields are not uncommon. And the average yield in Jasper County—which is typical—has been over 20 bushels per acre over a period of years.

Redtop and timothy have practically disappeared. But there are big crops of corn, wheat and clover, as well as soybeans.

There are several million-bushel soybean counties in the area now. But few soybeans were grown there 10 years ago.

A gray flat prairie soil is typical. It is a silt loam underlaid with an impervious hardpan. The soil was lacking in both minerals and humus when the fertilizer program began.

A liming program was started about 1937. And a complete program of fertilizers developed during the early war years. This included lime, phosphate and potash and side dressing with nitrogen.

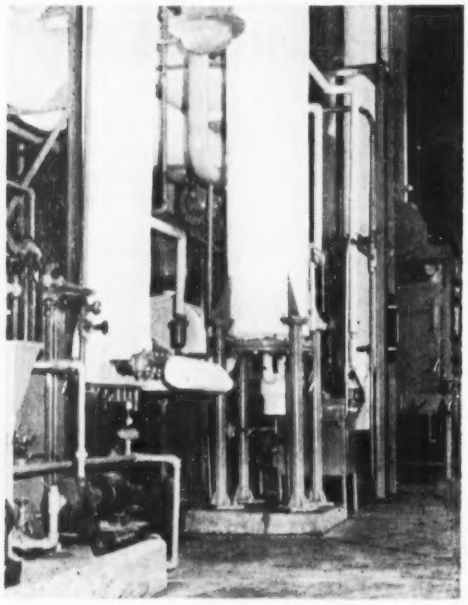
Two men sparked the program. They were:

Pat Johnson, Illinois agronomist who has experimental plots at Newton and other points.

L. E. Apple, local farm adviser. Both men live at Newton, in Jasper County.

The crop rotation that Mr. Johnson recommends for the area is corn, soybeans, wheat and clover, and this is the one now generally followed.

The land is flat, ideal for soybeans once the fertility level has been built up. There is not now much direct fertilization of soybeans. Once the proper level of potash and phosphorus is reached direct fertilization of the soybean crop is not needed.

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CROWN

The farms are rather small, averaging perhaps 100 acres. And most of them are owner operated.

As the new cropping program has come in the country has prospered. This is shown by many new modern school houses and farm homes that have been modernized the past few years. Most now have electricity, bathrooms, running water and home appliances.

The area lies in the St. Louis milkshed and much cream at one time was produced there. Now many farmers have quit livestock entirely. They take vacations in the winter time.

A number of grain handlers and elevators operate in the area where there were only a few 10 years ago. Typical is L. E. Kennedy of Kennedy's Grain Elevator at Newton.

Mr. Kennedy has 160,000 bushels grain storage, one of the largest in that part of Illinois. He handles several hundred thousand bushels of soybeans annually. Last year on a short crop he handled 400,000 bushels, but in 1950 the volume was 700,000 bushels in a county that produces a million bushels annually.

Mr. Kennedy's career has been largely built on soybeans. He began as a trucker. In the late 30's he was doing some liming for farmers and hauling corn from the grain farms farther north into the area to feed.

Then in 1941-42 he began hauling soybeans from Newton and surrounding points to the processing plants at Decatur and Gibson City. Farmers could gross about 25 cents a bushel more by selling to processors than by disposing of their beans to local buyers. So Mr. Kennedy got all the beans he could haul—and more.

The soybean acreage mushroomed, and by 1944 Mr. Kennedy had 100,000 bushels of soybeans to handle. So he built an elevator and spur on the railroad. The first elevator burned in 1950. He built the present cement storage bins in 1951.

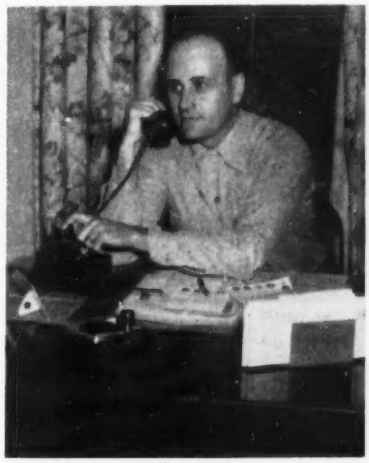
With two dumps, 38,000 bushels a day can be handled through the elevator. The elevator stays open around the clock during the rush season.

Fertilizers are combined with grain in the Kennedy operation. Ten truckers in addition to those working for his company haul fertilizers out of his plant to spread on the farm lands in the area. Over 2 million dollars worth has been sold in the past two years.

Mr. Kennedy is one grain handler who is a strong believer in changing the federal soybean grading standards in order to get cleaner soybeans. He says the present standards are losing him money.

During the 1953 season only 23 cars of 197 handled graded No. 2. Mr. Kennedy says. Over 4,550 bushels of dockage was taken in 171 cars of soybeans. This cost over $11,390 at $2.50 a bushel. He figures that dockage cost him $5,000 for the season.

The only way you can get clean beans is to pay a premium for them, says Mr. Kennedy.



**CAREER** of L. E. Kennedy grew out of soybean crop in southern Illinois.

Lincoln has been the leading variety in the area. Wabash and Adams are widely grown as they can be harvested early enough to be followed with winter wheat. A few Hawkeyes are grown. Chief was at one time the favorite but the soils have grown too rich for it. The plants grow too rank and fall over on the better soils.

—s b d—

## HIGH PROTEIN CORN VARIETIES

High protein varieties of corn may become an important source of protein for beef cattle, according to the Illinois State Agricultural Experiment Station.

R. R. Snapp, head of the beef cattle division at the University's College of Agriculture, says that steers fed such corn at the Experiment Station during the winter of 1951-52 gained as rapidly as similar steers fed regular corn and soybean oil meal.

Since no protein concentrate was needed by the high-protein corn-fed cattle, Snapp points out, their gains were cheaper than those in the check lot getting average corn and soybean meal supplement. This fact, together with a little higher selling price for the steers, resulted in a return of 15 cents more per bushel for the high-protein corn than for normal corn fed with a protein supplement, and 53 cents more per bushel than for normal corn fed only with corn silage.

This is the first time high-protein corn has been fed to beef cattle at the Illinois Experiment Station. Further tests, including digestive trials, are planned for the coming year, Snapp says.

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# Soybeans in Mississippi Agriculture

**By DR. C. DALE HOOVER**

*Head, Department of Agronomy, Mississippi State College, State College, Miss. Condensed from talk before soybean conference at Memphis, Tenn.*

THE DELTA AREA of Mississippi is the main soybean producing area in the state.

The place of soybeans in Mississippi agriculture, therefore, resolves itself into the place of soybeans in the agriculture of the Mississippi Delta.

The Delta area consists of approximately 6 million acres slightly over half of which is made up of heavy soils.

The light textured soils are the best cotton soils and can be cropped to cotton continuously. Although these soils will produce nearly as good yields of soybeans as the heavy soils, net returns from cotton are too much greater than soybeans to justify planting soybeans on the light soils.

Thus, the heavy soils are logically the areas where soybeans will be planted. These heavy soils produce high yields of forage and pasture crops; also rice can be profitably grown where there is an economical source of water supply.

There are several farm management factors which favor the production of soybeans on the heavy soils of the Delta.

Fortunately, soybeans should not be planted until about May 15 which is usually just after cotton planting.

Another important consideration is the fact that soybeans require no fertilization in the Delta. This crop grows fast and ordinarily does not present serious problems of weed control if the seed bed is free of weeds and grass when soybeans are planted.

The low labor requirement is another advantage to be considered in the production of soybeans, since cultivation and harvesting can be mechanized using standard equipment.

Although soybeans may be grown continuously on the same land in the Delta, on the basis of available information, it is recognized that there are residual benefits from soybeans to succeeding crops in a rotation.

Rotations would probably involve small grains and cotton with cotton following soybeans or a two-year rotation of soybeans and cotton.

In summary, it can be stated that the place for the production of soybeans in Mississippi is on the heavy soils of the Delta either continuously or in rotation with small grains and/or cotton.

—sbd—

## BUTLER SALES MEETING

With grain storage problems almost a sure thing for the coming year, salesmen in the farm equipment division of the Butler Manufacturing Co. were told by management that this could be a bonanza in reaching record sales goals for 1954.

This and other optimistic notes were brought out during an effusive three-day general sales meeting at Kansas City, Feb. 2-4. With Butler's biggest year behind them ($49,700,000 in shipments) company officials were already training their steel sights on a 10 percent bigger one.

The Department of Agriculture's on-the-farm storage problems should make this Butler's biggest year in the grain bin, grain storage tank and grain storage building business, claimed Treasurer Darius Melcher.

Highlighting the first large-scale sales conference since 1948 was a two-hour-long "Butler Products Revue" in the huge arena of Kansas City's Municipal Auditorium with professional actors, a brisk band and spritely quartet.

## FARMERS AND MARGARINE

Many farm families, including those who live on dairy farms, are heavy buyers of margarine, according to an informal investigation conducted among grocers by Farm Journal, Inc., marketing division.

Personal calls were made on 236 food stores, mostly in towns with 10,000 or less population in 13 states.

Of the 222 storekeepers who answered the question, "What percent of your oleomargarine sales are made to farm families?" 100 said that from 50 to 100 percent of total margarine sales in their stores were to farm families.

—sbd—

## STALEY SALES MANAGER

CHARLES N. FINSON

Appointment of Charles N. Finson, Monticello, Ill., as Illinois district sales manager has been announced by Clyde Thompson, manager of the formula feed sales department of the A. E. Staley Manufacturing Co., Decatur, Ill., processor.

Mr. Finson, a 1936 graduate of the University of Chicago, was formerly managing partner of the Finson Grain Co. at Monticello.

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# Fertilizers Can Up Southern Yields

PLANTING at the right time and use of suitable fertilizers would help southern farmers improve their efficiency in producing soybeans, the U. S. Department of Agriculture suggests on the basis of recent experiments in a number of states. Yields of soybeans in the South generally are considerably below the national average. Recent trials favor the use of lime, phosphate, and potash and (in general) somewhat later planting dates than have been customary in the South.

Over a three-year period in Louisiana tests, lime and fertilizer enabled soybeans to produce an average of 35 bushels per acre, but only 21 bushels without these materials. In North Carolina unfertilized beans yielded 22 bushels per acre, while a crop that got both lime and fertilizer made 34.4 bushels.

Potash and phosphate raised yields on Arkansas prairie soils, but not in the Mississippi Delta area. In general, the Department said, soybeans respond to fertilizer on most soils that produce more cotton with potash and phosphate.

E. E. Hartwig, Mississippi Delta Branch Experiment Station at Stoneville, reports that plantings between May 1 and 25 have given better results than earlier or later plantings in Mississippi and that top yields in Florida have come from seeding between June 1 and 15, later than usual.

Noting that 35 to 40 bushel yields are not uncommon in some big southern producing areas, Mr. Hartwig pointed out that average yields in the South have risen from barely more than nine bushels per acre in 1913 to 15.6 bushels in 1952. And in 1952 the national average yield per acre was 20.8 bushels.

Hartwig believes improved varieties and better production practices eventually may push the southern production per acre figure of soybeans up to—and perhaps above—the national average.

—s b d—

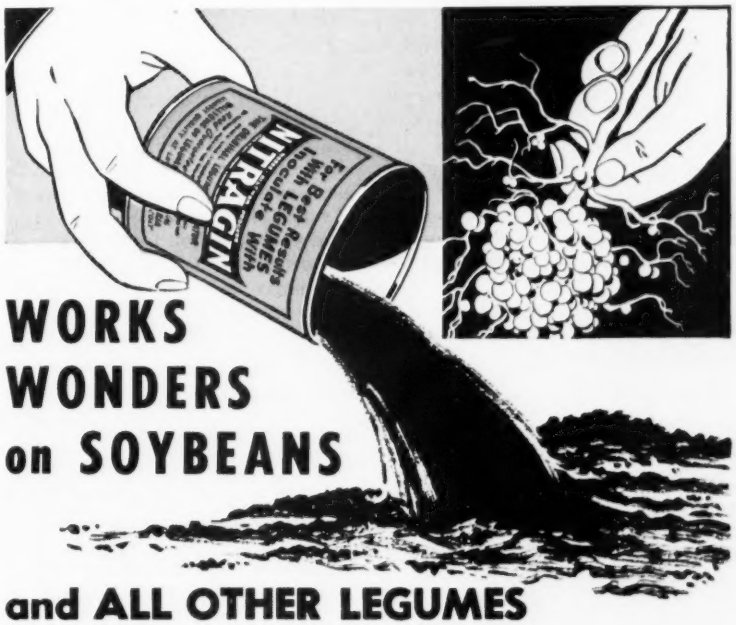
## SLIGHT FEED DECLINE

WIDESPREAD drought conditions during 1953 were reflected by a 55-percent decline in the manufacture of cattle feed in the Southwestern and Rocky Mountain states last year as compared to 1952, according to an industry report of the American Feed Manufacturers Association.

The government moved large tonnages of grain and protein feeds into drought areas. "Most of this volume was sold directly to farmers and ranchers at prices ranging from one-half to two-thirds of market value, and this was one of the major factors in business losses of feed dealers and manufacturers alike," said W. E. Glennon, association president.

"Despite the loss of a significant portion of the cattle and feed market and reductions in the 1953 pig and turkey crops, the total industry feed output declined only 2 percent. Increases in laying hen and broiler feeds helped to offset these losses," Glennon explained.

The AFMA president commented, "This is the first year since 1948 that feed output has failed to establish a new all-time record tonnage."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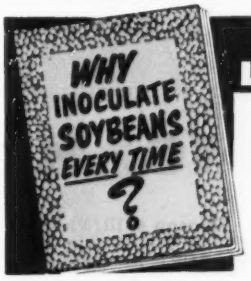


**DON'T COUNT ON LEFTOVER BACTERIA**

Depending on soybean bacteria left in the soil by previous crop can cost you money. New illustrated booklet cites experiment station results. Send postcard to The Nitragin Co., 3217 W. Custer Ave., Milwaukee 9, Wis. for your free copy.

# Missouri, Nebraska, Ontario Meetings

TRI-STATE University-Soybean Processors Conference for Minnesota, Iowa and Missouri will be held at Columbia, Mo., Mar. 18 and 19 beginning with a 6:30 p. m. dinner at the Daniel Boone Hotel. R. G. Houghtlin, president of the National Soybean Processors Association, has announced.

Feature of the Mar. 18 dinner meeting will be an address by Gordon B. Nance, extension professor of agricultural economics, University of Missouri, "The Possible Effects of Our Changing Agricultural Situation on the Soybean Industry." Mr. Houghtlin will be toastmaster.

Mar. 19 sessions will be held at the Union Building, University of Missouri, with W. C. Etheridge, department of field crops at the University, presiding at the morning session.

Morning theme will be, "Greater Soybean Production Efficiency Through Research." Morning speakers and their subjects will include:

"Soybean Varieties in the Tri-State Area," J. W. Lambert, University of Minnesota.

"Research on Weed Control in the Tri-State Area," R. S. Dunham, University of Minnesota; and D. L. Klingaman, University of Missouri.

"Soybean Diseases and Disease Research," L. F. Williams and M. T. Michaelson, University of Missouri; M. F. Kernkamp, University of Minnesota; John Dunleavy, Iowa State College.

"Research on Agronomic Practices," C. R. Weber, Iowa State College.

"Irrigating Soybeans," D. M. Whitt, University of Missouri.

"A Processor Looks at Soybean Research," Dwight L. Dannen, Dannen Mills, St. Joseph, Mo.

The afternoon session will include a panel discussion, "Fertilizing the Soybean Crop," with J. W. Calland, National Soybean Crop Improvement Council, Decatur, Ind., presiding.

Speakers and their subjects:

"Soil Tests and Ionic Saturation," E. R. Graham, University of Missouri.

"Calcium and Nitrogen," speaker from Minnesota.

"Phosphorus," J. T. Pesek, Iowa State College.

"Potassium, Magnesium and Minor Elements," George Smith, University of Missouri.

—sbd—

## NEBRASKA MEETINGS

TWO Nebraska soybean conferences for producers were held Mar. 2 and 3 in Fremont and Kearney. They were sponsored by the University of Nebraska College of Agriculture, the Nebraska Grain Improvement Association, Nebraska Crop Improvement Association, Dodge and Buffalo County Extension Services, Fremont and Kearney Chambers of Commerce and Nebraska processors.

Speakers included: Geo. M. Strayer, secretary of the American Soybean Association, Hudson, Iowa; Ward Calland, managing director of the National Soybean Crop Improvement Council, Decatur, Ind.; Professor A. L. Lang, University of Illinois, Urbana, Ill.; Fred H. Hafner, chemical division, General Mills, Inc., Minneapolis; and Donald G. Hanway, assistant professor of agronomy at the University of Nebraska.

Latest information on growing and markets was presented at the meetings. Topics included acreage and price outlooks for soybeans in 1954, recommended varieties and cultural methods, fertility requirements, report on soybean oil meal, seed treatment and inoculation, weed control and defoliation, and row spacing.

Panel discussions with local farmers who have had considerable experience in growing soybeans as participants highlighted each meeting.

—sbd—

## ONTARIO MEETING

THE FOURTH annual Ontario Soybean Convention was held at Chatham Feb. 25, with both Ontario and U. S. speakers.

"Soybean Varieties and Production," was covered by C. W. Owen of the Dominion Experimental Farm at Harrow, D. N. Huntley of the Ontario Agricultural College, Guelph, and F. Dimmock of the Dominion Experimental Farm at Ottawa.

"Special Soybean Research Projects at Ontario Agricultural College," was covered by P. VanSchaik, Ontario Agricultural College graduate student.

"Observations on Diseases and Disorders of Soybeans in Southwestern Ontario in 1953," was covered by A. A. Hildebrand, Science Service Laboratory, Harrow.

Ersel Walley, director of the American Soybean Association, Fort Wayne, Ind., spoke on "Domestic and Foreign Markets for Soybeans."

There were discussions on "How the Futures Market Is Used in Canadian Soybean Trading," and "Quality Essential to Maintain Strong Markets for Soybeans."

The film, "Market Place U.S.A.," by Merrill Lynch, Pierce, Fenner & Beane, was shown.

—sbd—

## HEADS BOARD OF TRADE

A slate of candidates headed by President Sylvester J. Meyers was elected unopposed in the annual ballot vote for officers of the Chicago Board of Trade and installed Jan. 25.


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CARL H. SMITH GEO. K. DAHLIN HUGH B. ELLSWORTH

it was announced by Secretary Robert C. Liebenow. Mr. Meyers is completing his first term as president. He previously filled the offices of first and second vice president and was a director of the exchange.

Julius Mayer, second vice president during 1953, has been named to the post of first vice president as the result of the election. He is executive vice president of Continental Grain Co.

Succeeding Mr. Mayer as second vice president is William G. Walton. A director of the exchange for the past five years, he is assistant secretary and assistant treasurer of General Mills, Inc.

Newly elected directors are: William G. Catron, Jr., vice president of the B. A. Eckhart Milling Co.; and James P. Reichmann, broker. Mr. Reichmann is also president of the Grain Exchange Institute, Inc. Directors reelected for three-year terms were: Henry M. Wolf, broker; James S. Schonberg, assistant secretary, Uhlmann Grain Company; and Vincent W. Rooney, broker.

— s b d —

## JOINS GIRDLER CO.

W. DOSS LUMPKIN

W. Doss Lumpkin has been appointed to the sales staff of the Votator division of the Girdler Co., Louisville, Ky. He is widely known in the fats and oils industry and is a specialist in processes and equipment.

Mr. Lumpkin will be associated with the division's expanding fats and oils section, headed by Allen Bond.

He represented the Filtrol Corp. in the United States and Canada, and had charge of the company's field activities in the fats and oils industry before becoming a member of Girdler's organization.

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# PUBLICATIONS

**For a complete list of books on the soybean crop and industry and related subjects drop a postcard to Circulation Department, Soybean Digest, Hudson, Iowa. Copies of books and other publications listed on our pages will be obtained for readers when requested, if possible.**

**FERTILIZER.** About two-thirds of the soybean soils in North Carolina need lime, 30 percent are low in phosphorus, and two-thirds are low in potassium, reports W. L. Nelson of North Carolina State College.

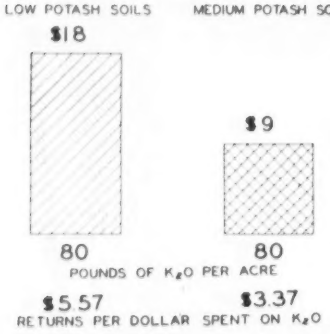
Applications of all these fertilizers on the soybean crop have given high returns where the soils were low in them, Nelson says.

Where soybeans are grown in rotation with heavily-fertilized crops like vegetables or tobacco in North Carolina they may not respond to applications of phosphate and/or potash after the levels of these nutrients have been built up in the soil.

North Carolina farmers are showing considerable interest in broadcasting fertilizer for row crops. For soybeans, if your soil is reasonably well supplied with phosphorus and potassium, broadcast applications of phosphate materials or of phosphate-potash mixtures should be satisfactory to maintain the soil fertility.

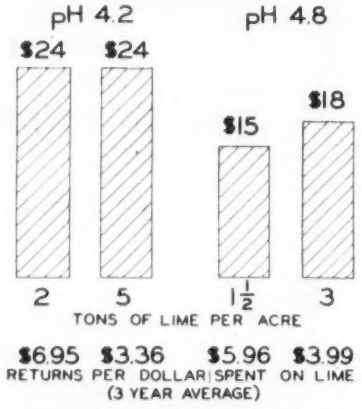
LIME AND FERTILIZER PAY OFF. Bulletin 385. By W. L. Nelson. Agricultural Experiment Station. North Carolina State College, Raleigh, N. C.

VALUE OF SOYBEAN RESPONSE TO POTASH ABOVE COST OF POTASH ($K_2O$)




**SOYBEANS** respond well to potash on low potassium soils. Eighty pounds per acre of $K_2O$ increased the per acre value of the crop $18 and $9 on the low and medium soils respectively. Taken from nine experiments. Adequate lime and 80 pounds per acre $K_2O$ applied.

VALUE OF SOYBEAN RESPONSE TO LIME ABOVE COST OF LIME




**RESPONSE** of soybeans to lime depends on soil acidity. At pH 4.2, two tons of lime was enough. At pH 4.8 1½ tons was adequate but gave considerably less response. On Hyde loam and Craven fine sandy loam respectively. Adequate phosphate and potash were supplied.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**STORAGE.** Larger net profits could have been made by storing soybeans instead of corn the past eight years, according to a Purdue University study.

But the advantages of storing soybeans in relation to storing corn will probably diminish, because the soybean industry is maturing and more farmers are storing their beans.

For $2.40 soybeans, the farm storage cost ranges from 25 to 32 cents, according to Purdue. These costs will vary depending on interest, insurance and tax rates; the price of soybeans at harvest; how well the beans are taken care of; and the type of storage used.

If you already have storage space, you can omit the cost of space from your calculations, because this cost will accrue whether or not the space is used. Disregarding the cost of storage space, the nine-month cost per bushel of soybeans would be about 22 cents.

Elevator storage, where available, costs about 16 to 17 cents for nine months. This estimate includes cost of handling.

Interest and insurance costs can be eliminated when grain is stored for a CCC loan, provided it is to be delivered to pay off the loan. This would reduce storage costs to a range from 12 to 22 cents per bushel.

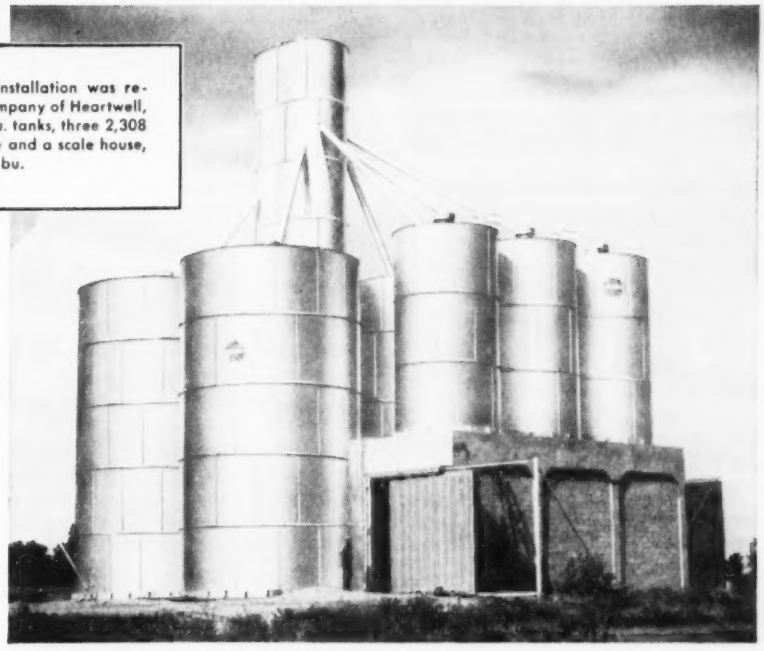
The average price rise for soybeans from harvest until the following July has been larger than the price rise of corn. And storage costs appear to be a cent or two lower.

CORN AND SOYBEANS—STORE OR SELL? By J. A. Shute. Economic and Marketing Information, Aug. 25, 1953, Purdue University Agricultural Extension Service, Lafayette, Ind.

**HAIL DAMAGE.** Studies on the effects of injury simulating hail on soybeans and corn were conducted at Iowa State College during the years 1943-1952. The investigations attempted to measure the components at various stages of growth contributing to injury.

Under study were: seed yield, maturity, height, lodging, and chemical composition as affected by injury. The

This BS&B Bolted Steel Grain Tank installation was recently completed for the Hart Grain Company of Heartwell, Nebraska. It consists of four 11,776 bu. tanks, three 2,308 bu. tanks, a 9′ x 15′ x 32′ head house and a scale house, for a total storage capacity of 54,028 bu.



# Wise Grain Operators Choose BS&B BOLTED STEEL GRAIN TANKS Because...

## No Other Type of Grain Storage Gives Them ALL 6 Features!

### FEATURES

1. Moisture and Vermin Proof!
2. Greatest Fire Protection!
3. Cleaner, Safer Grain Storage!
4. Faster and Cheaper to Erect!
5. More Economical To Operate!
6. Lower Insurance Rates!

Grain men in all parts of the country are choosing BS&B Bolted Steel Grain Tanks whenever new storage capacity is needed, because they know that BS&B Tanks will give them a greater return on their investment than any other type of storage!

BS&B Tanks are non-porous and are tightly sealed with rubber gaskets to make them absolutely vermin and moisture proof! Unlike wood or concrete, the steel walls cannot absorb moisture, nor can condensation or "sweating" occur when stored grain has an original moisture content of less than 13%. No more sticky or fermented grain . . . tanks empty clean!

The steel construction of BS&B Tanks has other advantages, too, in providing the greatest possible protection from external fire hazards, and in virtually eliminating the possibility of spontaneous combustion from damp grains! Since they *are* safer, insurance rates on the contents are lower, too . . . in some instances as much as 35%!

BS&B Tanks can be completely erected and in service within 3 days after foundations are ready. Because of their better "keeping qualities", grain does not have to be "turned" as frequently as with other types of storage. This means money saved on erection, and money saved on every day's operation!

**Ideal For Fish and Vegetable Oils, Too!** BS&B Bolted Steel Tanks have found wide use in certain geographical areas for the clean, safe storage of fish oils, peanut oil, linseed oil, flaxseed oil, cottonseed oil and molasses. Whatever and wherever your storage needs, BS&B Bolted Steel Tanks will meet your specifications—and at lower cost! Ask your BS&B Man...or write for complete information.

EFFICIENCY OVER 60 YEARS BS&B RELIABILITY

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investigations have been summarized and are available as shown below.

The significance of the studies to the average producer is that an estimate of loss can now be placed on damage to growing crops. The cause of the damage might be wind, rain, hail, insects and possibly disease.

Such questions can be answered as: Is replanting necessary or desirable? What amount of loss is likely to be incurred? If insurance is involved what adjustments are fair?

The research has been used much in the adjustment charts prepared by hail insurance companies. In past years, many adjustments were made by guess. Now there is a basis for adjustments.

It is hoped that insurance premium rates to producers will be adjusted accordingly. There is some evidence that this has already been done. In past years many insurance companies would not write hail insurance on soybeans. And if such insurance were written an extra charge was made. Today, this is not true.

THE EFFECT OF INJURY SIMULATING HAIL DAMAGE TO SOYBEANS. Research Bulletin 359. Jan. 1949. By R. R. Kalton, C. R. Weber and J. C. Eldredge. Iowa Agricultural Experiment Station, Ames, Iowa.

EFFECTS OF CERTAIN COMPONENTS OF SIMULATED HAIL INJURY ON SOYBEANS AND CORN. Research Bulletin 400. Oct. 1953. By M. P. Camery and C. R. Weber, Iowa Agricultural Experiment Station, Ames, Iowa.

PROGRESS REPORT, 1951-52, in process of publication. Effects of defoliation and topping simulating hail injury to soybeans.

**PRICES.** Soybean prices may vary considerably over the state of Indiana on the same day, as both farmers and elevator operators are aware.

A study made by Purdue University of the prices paid by 64 elevators in 1951 showed a price variation of as much as 20 cents on the same day during the period Oct. 1-20.

*(Similar variations are apparent in some other states, according to reports to the Soybean Digest.*—EDITOR.*)*

Prices vary from elevator to elevator due to differences in terminal market prices, elevator efficiency, competition and freight rates.

Rail transportation costs do not play a major role in price variation for soybeans as they do for corn and

wheat, according to the Purdue study.

WHY DO SOYBEAN PRICES VARY? By James A. Shute, Economic and Marketing Information, Aug. 25, 1953. Purdue University, Lafayette, Ind.

**GIANT FOXTAIL.** The rise in importance of giant foxtail as a major weed problem in the Midwest area may be correlated with the increase of soybeans as a major crop, according to F. W. Slife of the University of Illinois. The weed flourishes in soybeans.

Combines as well as impure crop seed have been major factors in moving giant foxtail from farm to farm and to new areas in Illinois.


**TRY THE BAG RATS DON'T LIKE**

Fulton BAG & COTTON MILLS

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WINNSBORO SEED & EQUIPMENT COMPANY
P. O. BOX 508
WINNSBORO, LOUISIANA

July 14, 1953

Fulton Bag & Cotton Mills
P. O. Box 198
New Orleans, La.

Gentlemen:

This spring we stored 1,000 Bags of Soybeans in a ground level warehouse for approximately four months. Approximately 750 of these were your "Ratscat" bags. When the stacks were torn down there were 3 slightly damaged bags in the "Ratscat" stacks. In the untreated stacks there was considerable damage, resulting in us having to resack about 20 of the remaining 250 bags of beans.

We feel that we have received several times our money's worth on these bags and assure you that we will never buy an untreated bag while the treated ones are available.

Very truly yours,

WINNSBORO SEED & EQUIPMENT CO.

T.C. HATFIELD

TCH/rm

GIANT FOXTAIL. PROBLEMS IN CONTROL. By F. W. Slife, Sixth Illinois Custom Spray Operators' Training School. Extension Service, University of Illinois, Urbana, Ill.

**DORMAN.** The Dorman variety is adapted to the northeastern, central and east central sections of Oklahoma.

In four-year tests by the Oklahoma Experiment Station Dorman averaged one bushel per acre higher than S-100, and the oil content averaged 1.7 percent higher.

Yields of Dorman have ranged from 45.1 bushels per acre at Bixby, Okla., in 1950, to a low of 6.5 bushels per acre at Perkins, Okla., in 1952.

DORMAN SOYBEANS FOR OKLAHOMA. By Ralph S. Matlock. Oklahoma Agricultural Experiment Station, Stillwater, Okla.

**IOWA VARIETIES.** A circular has been issued by the Iowa Agricultural Experiment Station covering Iowa soybean variety tests from 1946 through 1953. It was prepared by C. R. Weber.

Leading varieties grown in the state are compared for maturity, height, lodging, yield, and protein and oil content and iodine number.

Varieties compared include Ottawa Mandarin, Habaro, Monroe, Blackhawk, Earlyana, Hawkeye, Harosoy, Korean, Bavender Special, Adams, Lincoln, Chief, and Clark.

IOWA SOYBEAN VARIETY TESTS. By Charles R. Weber. Agron. 289. Iowa Agricultural Experiment Station, Ames, Iowa.

## MISCELLANEOUS

SOYIN, A TOXIC PROTEIN FROM SOYBEAN. III. IMMUNOCHEMICAL PROPERTIES. By Irvin E. Liener and Joseph E. Rose, department of agricultural biochemistry, University of Minnesota. Soc. Expt. Biol. & Med. Proc., July 1953. Vol. 83, 539-544.

PREPRESSING OF SOYBEANS PRIOR TO SOLVENT EXTRACTION. By John W. Dunning and R. J. Terstage, V. D. Anderson Co. Journal of the American Oil Chemists Society, January 1954. 28-30.

CHEMICAL WEED CONTROL IN CROPS. By Roy J. Smith, Jr. Sixth Illinois Custom Spray Operators' Training School. Extension Service, University of Illinois, Urbana, Ill. Describes use of DNBP, C-IPC, herbicidal oils and 2,4-D for controlling weeds in soybeans.


Greater bushel-per-acre increase with **SPERGON**®!

Greater dollar-per-acre increase for you!

"3.1 bu. per acre increase...17.6% increase in plant weight... 53.5% increase in bean weight". These are just a few of the Spergon success stories with soybeans that spell more profitable sales. That's because Spergon Seed Protectant protects your crop against bad-weather risks by effectively preventing seed decay, "damping off", Purple Stain and many other fungus diseases.

Spergon lets you plant less seed per acre and lubricates that seed for less planter breakage and easier planting. It works very effectively with legume inoculants and is non-hazardous.

**Order Spergon or formulations containing Spergon from your local supplier today and watch your profits grow.**

50TH ANNIVERSARY 1904 1954 NAUGATUCK CHEMICAL

**Naugatuck Chemical**

*Division of United States Rubber Company*

ELM STREET, NAUGATUCK, CONNECTICUT

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap.

# GRITS and FLAKES... FROM THE WORLD OF SOY

◆ The Textile Bag Manufacturers Association elected Clarence E. Elsas of Atlanta, Ga., to head the group for the coming year at the annual winter meeting in New Orleans. Elsas, who is president of Fulton Bag & Cotton Mills, is serving his second term as head of the association.

◆ Raymond W. Pifer, executive secretary and manager of the Ohio Aberdeen Angus Breeders' Association for the past two years, has joined the staff of McMillen Feed Mills. He will work closely with Master Mix sales representatives on beef cattle, hog and sheep feeding programs.

◆ Frank J. Ronan has been named Chicago district sales manager for Grace Chemical Co., 75 E. Wacker Drive. A graduate of Northwestern University, he was associated with Pittsburgh Coke & Chemical Co. in Chicago before joining Grace Chemical.

◆ *Charles Van Horssen, Chicago, feed consultant for General Mills, Inc., retired recently after 25 years service with the company.*

◆ A new product, "Master Mix Dogburger," is now being manufactured and marketed by McMillen Feed Mills, Fort Wayne, Ind. It is a complete food that can be hand-fed either dry or moistened, or cafeteria style self-fed. It is available in a mealized or cube-ized form in five to fifty-pound paper bags.

◆ Donald Danforth, president of Ralston Purina Co., St. Louis, was principal speaker for the annual dinner of the St. Louis Merchant's Exchange. He urged members to work closer with farmers and government.

◆ Rules for the 1954 Uhlmann awards grain marketing essay contest for college students were announced by Richard F. Uhlmann, president of Uhlmann Grain Co., sponsor, and the Chicago Board of Trade, contest administrative agency. Cash prizes totaling $1,250 will be distributed to writers of the 14 top papers entered. First place winners in each division will receive $300.

◆ *About 300 members of the press attended the recent press party given by the Chicago Board of Trade at the Chicago Club. A pleasant, informal affair.*

◆ R. P. Bailey is district sales manager of the new Blackhawk sales district of Allied Mills, Inc., with headquarters at South Beloit, Ill., it was recently announced. The district will take in sales territories of northern Illinois and all of Wisconsin. Mr. Bailey has been connected with the feed business for about 25 years.

◆ The construction of a new $800,000 feed mill to replace one destroyed by fire Nov. 27 was started by Dannen Mills, Inc., St. Joseph, Mo., Jan. 20. With

## HEADS GOP FARM COUNCIL

HOWARD L. ROACH

The National Republican Farm Council Feb. 24 elected Howard L. Roach, Plainfield, Iowa, as chairman, succeeding Harold McKinley, St. Ansgar, Iowa, who resigned last fall.

Roach, livestock and dairy farmer, also is chairman of the Iowa State Farm Council, and director of the American Soybean Association. His firm operates a grain elevator and feed mixing plant and he is a farm management consultant.

The national council, after a two-day meeting in Washington, said it was ready to carry the Republican "Farm Story" to the rural voters in the November congressional elections.


**WILBUR-ELLIS COMPANY**

**Brokers of Soybean Oil and Proteins**
**COMPLETE DOMESTIC AND FOREIGN COVERAGE**

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Telephone: ANDOVER 3-7107

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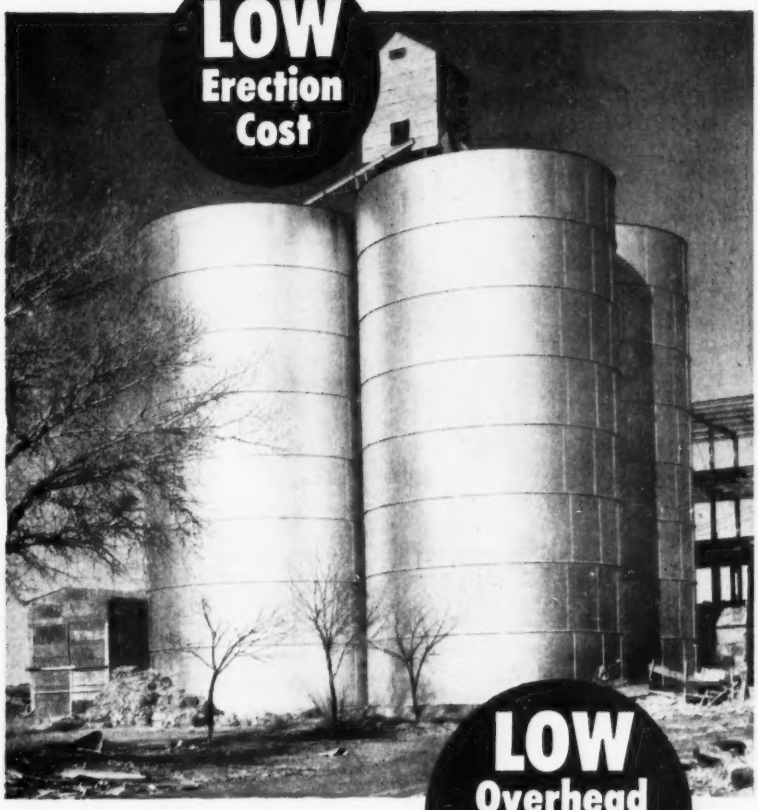


# DOWN Go Expenses UP Go Profits

when you install Columbian Bolted Steel Grain Storage Tanks. That's because your original investment and maintenance are held to a minimum—you are sure of low operating costs for years on end. An added money-saving feature of these tanks is low cost erection due to their bolted sectional construction.

Fire-proof, weather-proof, rodent-proof. They never crack or crumble—no caulking or patching required. Service tests of more than 25 years prove them ideal for safe storage and handling of all small grain—wheat, corn, oats, barley, soya beans, flax, cotton seed, peanuts, rice, coffee beans, etc. None have ever worn out; not one has ever been demolished by tornado or cyclone.

**Easy Ways to Erect** — Detailed blueprints for erection are furnished so that tanks can be put up with any kind of labor—or we provide supervisor for your own men—or a complete Columbian erection crew. Foundation specifications and blue prints are furnished to enable your local contractor to build foundation.

Free engineering service for designing tanks to your particular needs and arrangement.

# COLUMBIAN
## BOLTED STEEL GRAIN STORAGE TANKS

## COLUMBIAN
### Industrial Type Metal Buildings

Pictured at right is a typical example of how Columbian designs metal buildings to meet your specific needs. Rigid, weather-tight, fire-safe, these buildings are ideal as feed stores, offices, warehouses, etc. Sectional construction assures easy, low-cost erection. Requires minimum upkeep. Write for complete information.

WRITE NOW for free literature giving complete information and picturing many types of installations.

**COLUMBIAN STEEL TANK CO. P.O.Box 4048-U, Kansas City, Mo.**

(Associate Member of the Grain and Feed Dealers National Association)

Reg. U.S. Pat. Off.

a production capacity of 25 tons per hour, it will have double the capacity of the destroyed plant. The new mill will be of the push-button type, with semi-automatic devices located throughout the structure.

◆ Appointment of Ralph T. Sherden as general foreman of the new feed mixing plant of the A. E. Staley Manufacturing Co., Decatur, Ill., has been announced. He has been a member of the company's engineering staff since 1947. The new plant will consolidate most of the Staley Co.'s feed operations in one location.

◆ Robert L. Moore, Jr., has been appointed manager of American Mineral Spirit Co.'s Midsouth division with offices at Jackson, Miss. He succeeds Thomas Barker who is moving to the sales staff of the company's headquarters in Chicago. Moore will be responsible for the marketing of Amsco's complete line of technical naphthas in Missouri, Mississippi, Alabama, Louisiana, and parts of Florida and Tennessee.

◆ *Eli Lewis, Armour & Co., Chicago, has been named chairman of the board of directors of the National Association of Margarine Manufacturers, Washington, D. C. He is manager of Armour's margarine department.*

◆ Industrial Filter & Pump Manufacturing Co., 5900 West Ogden Ave., Chicago, announces the transfer of K. C. Johnson from its home office to the Pacific Coast as regional field engineer. He will work out of the company's offices in Los Angeles and San Francisco.

◆ Blaw-Knox Co.'s chemical plants division has won first place in the national accident prevention contest of the Associated General Contractors of America for 1953. This award recognizes the best safety record in Group A, which includes contractors doing more than 500,000 man hours annually. During 1953 chemical plants division of Blaw-Knox did more than 15 million man hours of construction work.

◆ Don Davis has joined the personnel at Reichman-Crosby Co., Memphis, and will have charge of promotion of electrical sales. He has a degree in electrical engineering and several years practical experience in selling and operation of electrical equipment.

◆ *Seedburo Equipment Co., Chicago, Ill., has appointed Riechman-Crosby Co., Memphis, Tenn., exclusive distributor for its complete line.*

◆ J. W. Nuckolls, Jr., has joined the staff of Riechman-Crosby Co., 59-year-old Memphis, Tenn., mill supply house, to be in charge of its engineering department. He is a graduate of the University of Tennessee in mechanical engineering and served as an Army artillery battery commander during World War II.

◆ Carl W. Weber has been appointed sales assistant in the chemical division of General Mills, Inc. He will be responsible for office operations of the division's sales department at Kankakee, Ill. He joined General Mills in 1935.

## FULTON BAG CO. CHANGES

JASON M. ELSAS

Election of William N. Banks, nationally known Georgia industrialist, as a director of Fulton Bag & Cotton Mills, was announced in Atlanta following a meeting of directors and stockholders.

Norman E. Elsas, chairman of the board of directors, also announced the election of Jason M. Elsas, New Orleans, as executive vice president of the company. At the same time, it was revealed that a general sales office will be established under the direction of Mr. Elsas in New Orleans.

This office will be in addition to Fulton's new plant now under construction there, of which Mr. Elsas is general manager.

— s b d —

## BRITISH CONTROLS OFF

The British Ministry of Food has announced that control over processing, sale and use of certain oilseeds and edible oils, including soybeans and soybean oil, ended Jan. 1 and private imports again were to be permitted, according to Foreign Crops and Markets, publication of the U. S. Department of Agriculture.


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**BROKERS VEGETABLE OILS, ANIMAL FATS**

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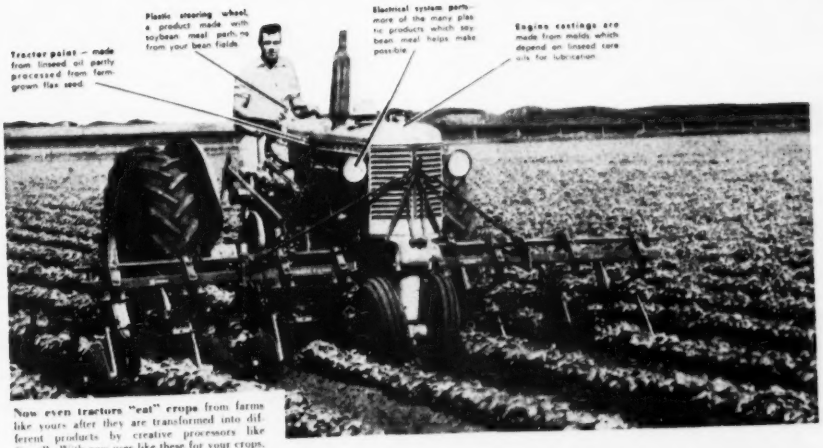

Tractor paint — made from linseed oil partly processed from farm-grown flax seed.
Plastic steering wheel, a product made with soybean meal partly from your bean fields.
Electrical system parts—more of the many plastic products which soybean meal helps make possible.
Engine castings are made from molds which depend on linseed core oils for lubrication.

**Now even tractors "eat" crops** from farms like yours after they are transformed into different products by creative processors like Cargill. With new uses like these for your crops, no wonder Creative Processing eats up ¾ of all farm products.

# He's cultivating parts of a tractor

## These soybeans may end up in your tractor thanks to Creative Processing that uses up ¾ of farm products.

Tractors help produce soybeans. Soybeans help produce tractors. Almost unbelievable, isn't it, that things you grow help make the implements you use to grow them.

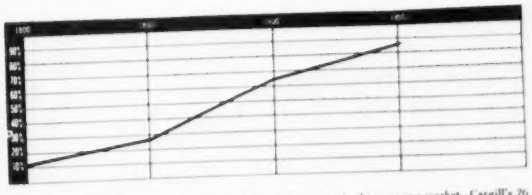
Note around the tractor picture above just four of the important uses made of soybeans and other products grown on farms in this area, and at least partly processed in Cargill plants.

Every day Cargill Creative Processing is helping to stimulate the market for dozens of farm products. Prices go along with supply and demand. Cargill is glad its Creative Processing broadens the markets for the products you grow.

Through its feed and seed divisions, Cargill also processes many products for more profitable farm use.

**Your market for** soybeans is better because this pie—and millions like it every day—is baked with shortening containing soybean oil. Soybean farmers need creative processors to take beans from the fields and end up with cans of shortening on grocers' shelves—and Cargill soybean oil plants are part of this creative processing chain.

**Because Cargill pioneered** the use of antibiotics and Vitamin B-12 in its Nutrena Pig and Hog Feeds, many farmers report they can now raise hogs faster than ever before. Nutrena Feeds are another important phase of Cargill's Creative Processing. In Nutrena feed mills up to 31 different farm grown ingredients are processed into more than a hundred feeds for livestock and poultry. This helps make a bigger demand for the grain you grow and, at the same time, gives you better feeds than you could mix yourself.



**How farm markets have grown** can be traced on this chart which shows the increase in Americas non-farm population. As more people move to cities and towns, the greater is the market for farm products. That's a big reason why figures now show about 75% of all farm products are "eaten up" somewhere else than on the farm where they were grown. Creative processors like Cargill play an important part in helping supply this growing market. Cargill's 26 factories and processing plants are all close to the growing areas of the farm products needed. This makes more markets available for the farmers of these areas. In addition, Cargill's grain marketing division sells grain to other processors all over the world, and thus helps get better prices for your farm products.

# CARGILL, Creative Processors of Farm Products

Processing and Grain Marketing Offices in Minneapolis and 35 other cities

Cargill CREATIVE PROCESSING

**This is how** Cargill is telling the importance of processing and processors to farmer-readers of papers like The Farmer, Wallace's Farmer, Dakota Farmer, etc.

you get
*Better*
*Extraction* at
a *Lower*
*Operating Cost*
when you use
**ESSMUELLER SOYBEAN SERVICE!**

Essmueller Soybean Service is devoted entirely to helping you solve your soybean extraction problems. Backed by 75 years of experience, this outstanding service is available to you without obligation.

**ROLL GRINDING and CORRUGATING**

To get the most **efficient** and **economical** extraction, your cracking rolls must be sharp! Regardless of the size or finish of your rolls, the ESSMUELLER CO. has the experience, skill and equipment necessary to keep your rolls in top condition.

**ELEVATORS**

From the smallest to the largest we can supply any standard or special unit elevator in regular or special steel construction.

**CONVEYORS**

All types for **every** operation. Standard screw or special design in regular or stainless steel.

*We Invite Your Inquiries!*

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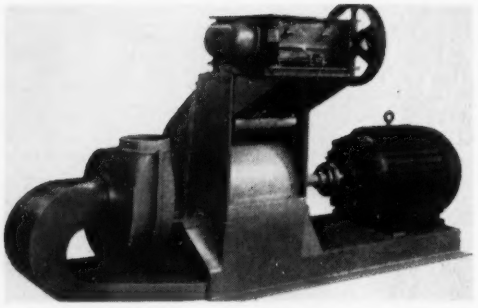
# NEW PRODUCTS and SERVICES



**HAMMERMILL.** A new bulletin introducing the Schutte Instant-Screen-Change Hammermill has just been published by Schutte Pulverizer Co.

Outstanding features described in detail are instant-screen change; simplified, heavy steel construction; 10-surfaced adjustable hammers and built in crusher-feeder. Five models are available.

For details write Soybean Digest 3h, Hudson, Iowa.

**STEEL BUILDINGS.** A new booklet, "Steel Buildings for Practical Farmers," has been issued by U. S. Steel Corp. to answer the numerous inquiries the firm has had from farmers for information about factory-built steel farm buildings now on the market.

The company says there is a definite upsurge of farm interest in factory-built steel buildings since steel buildings are now functionally built for farm use, they are competitively priced, and the shortage of skilled workers makes it practical for a farmer to buy a completely manufactured building that can be easily assembled by farm workers.

For a copy of this booklet write Soybean Digest 3d, Hudson, Iowa.

**SPRAY FOLDER.** A new folder entitled, "There Is an Easier Way to Spray," is offered by the Hanson Chemical Equipment Co.

The informative folder is loaded with pictures and charts explaining the Hanson Brodjet principle of chemical application and how it can make farming more profitable.

Detailed photos show the simplicity of the famous boomless sprayer, and illustrate its versatility and effectiveness, the manufacturer says.

For a copy of the folder write Soybean Digest 3c, Hudson, Iowa.

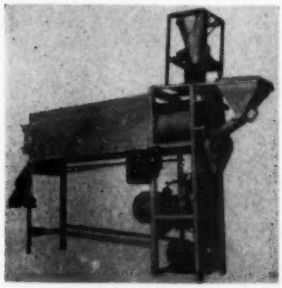
**BIN LEVEL.** A new catalog that describes and illustrates the company's products is announced by the Bin-Dicator Co. The firm manufactures a complete line of pressure-actuated bin level indicators that have come into wide use as a simple, reliable and inexpensive means of indicating the level of various materials stored in tanks, silos, hoppers and bins.

The new catalog supplies complete installation data for various types of units, for thick or thin-walled bins, for inside and outside locations and for suspended interior installations.

Several new and improved models are available.

For a copy of the catalog write Soybean Digest 3b, Hudson Iowa.

**SEED TREATMENT.** O. W. Kromer Co. has announced a "revolutionary new method of seed treatment" that coats seed uniformly and does not affect mechanical planting.



The new method of seed treatment corrects the old problem of lumpy, spotty coating that interfered with mechanical planting and did not give complete protection. Chemical can easily be applied to all seed regardless of size or irregularity.

Production models of this machine have been tested by some of the larger canning and seed companies for two years.

For further information write Soybean Digest 3f, Hudson, Iowa.

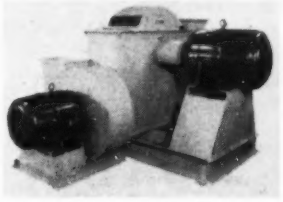
**BAG OPENER.** With the recently patented instant bag opener you can easily open bags of feed, seed and other products that have been sewed with a chain stitch. The stitch is released instantly—no cut bags or fingers!

Also useful for raveling empty bags which are to be used for making clothing or needlework art. Made of lightweight, tough, durable red plastic and surgical steel and boxed with instructions.

For feed mills and other farm suppliers the instant bag opener can be imprinted with two lines of copy, thus providing a good medium of advertising.

For full information write Soybean Digest 3l, Hudson, Iowa.

**HAMMERMILL.** Byant Engineering Co. has announced production of its new hammermill, called "Double-Duty," because of its ability not only to grind but also to elevate and convey large capacity for long distances.



This mill is so designed that the large 1800 RPM fan, operated by a separate motor, draws air through a specially-designed air duct, in addition to drawing air and feed through the screen. This feature allows the fan to operate at peak efficiency at all times, thus eliminating the dirty and dangerous hazard of a plugged fan.

The largest of this new series is said to grind 20 tons per hour and have the ability to elevate and convey the material a distance of 150 feet (farther on special applications).

For more information write Soybean Digest 3g, Hudson, Iowa.

**GRAIN DRIERS.** Aeroglide Corp. has released a revised booklet illustrating its line of grain driers and handling equipment for soybeans and all free-flowing grains.

The booklet contains information of interest to all types of plants, and answers many questions about the operation of grain driers and their practicability.

A full page cutaway diagram illustrates the basic functioning principles of the drying method employed.

Persons interested in receiving the brochure may obtain it by writing to Soybean Digest 3e, Hudson, Iowa.

**DISTILLATION.** Custom-engineered columns, exchangers, reboilers, auxiliaries and controls for use in distillation operations, are the subject of a new booklet offered by the Colonial Iron Works.

The free literature illustrates and describes the various products available, likewise engineering services covering such fields as fractionation, thermal design and fabrication.

For copies of this booklet write Soybean Digest 3a, Hudson, Iowa.

**FOR SMOOTHER, MORE EFFICIENT PROCESSING**

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If you're converting to the solvent method of extraction, be sure to include the Prater Pulverizer and Prater Rotary Airlock Feeders as part of the system. With them, Prater offers years of experience serving the soybean industry, plus up-to-date recommendations to make your operation satisfactory in every respect.

The Prater Rotary Airlock is built in two sizes, 8" and 10" requiring 1/3 HP and 1/2 HP respectively. It is furnished as a complete "package unit" or may be purchased without motor.

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# WASHINGTON DIGEST

**By PORTER M. HEDGE**
**Washington Correspondent for The Soybean Digest**

**BUTTER.** The big question hanging over vegetable oil markets is how the Administration's butter disposal program will affect prices.

There *IS* to be a butter disposal plan of some kind. As the Digest went to press, it appeared that a program would be ready for announcement within a week or so.

Use of a combination of disposal methods is likely, including:

1—Continuation of surplus butter distribution through school lunch program and various relief channels, and minor diversion into other products such as cocoa butter extender.

2—Domestic sale of surplus under the "blended price" proposal advanced by the National Milk Producers Association.

3—Eventually, sale of some surplus butter into foreign markets, after U. S. housewives have had a chance at lower prices.

Most attention is centered on domestic disposal plans, since this is the point at which surplus butter would enter into competition with other fats and oils products.

It's pretty well recognized that there is no "good" domestic disposal plan that won't hurt somebody. Even the butter people say this. At the same time, they feel that the surplus has to be moved in some way before there is any chance to operate on a free market.

Producers of vegetable oils are concerned for fear that disposal of such a large supply of butter (roughly 275 million pounds) will depress oil prices and reduce consumption of margarine. Secretary of Agriculture Benson has opposed in principle the selling of surplus butter stocks abroad at a price lower than the U. S. housewife has to pay. At the same time, most authorities agree that no disposal program can be complete without eventual sales into foreign markets.

Italy, for example, is reported as wanting 20 million pounds of butter. It's pointed out that it wouldn't take many foreign sales of this size to move out a big chunk of the U. S. excess stocks. And it's believed that in the last analysis the Administration will agree to some foreign sales.

Here in a nutshell is the National Milk Producers Federation Plan that is getting most consideration:

"The proposal contemplates the releasing by Commodity Credit Corp. of its stocks of butter into the domestic channels of trade at a reduced price which will reflect a lower price to the ultimate consumer.

"The CCC will sell its bulk butter stocks to printers (commercial packagers) of butter at a price which, when averaged with the market price (approximately the support price) will move CCC butter out of storage.

"It is recommended that CCC start its program at a price level which would involve as little loss as possible on government stocks. This price level can gradually be lowered until the customer acceptance price is reached.

"As the stocks move and become short, this level could be raised so as to keep CCC losses at a minimum."

The Milk Federation proposal was drafted before USDA announced a reduction in dairy product support prices for the coming marketing year from 90 to 75 percent of parity.

Margarine people here feel that if the full CCC surplus were moved at prices roughly corresponding to those in this plan, margarine would stand to lose 10 to 20 percent of its market in the first year.

Reduction in the price support for butter alone is not calculated to have any great effect on consumption of margarine—perhaps reduce use some but not much over the long run. A combination of lower butter support and domestic surplus disposal is figured to have a sharp effect on margarine use—and at least temporarily on sensitive oil markets.

**COTTONSEED.** There's another action in the wind that could affect soybeans and the relation between soybean and cottonseed oil—the 1954 cottonseed price support program.

Representatives of cottonseed crushers have again proposed that support for cottonseed be dropped, or if not dropped entirely reduced to 60 percent of parity for the 1954 crop.

Abandonment of cottonseed supports was sounded out on the Hill last fall, but this idea was given up in favor of cutting the support to 75 percent of parity so as to get cottonseed more in line with soybeans.

It's still doubtful that the Adminis-

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tration will pull out of cottonseed support entirely, but some observers who are keeping a close watch on developments believe there is strong sentiment in USDA for again lowering the support, this time to 60 percent of parity.

Soybean interests are protesting any move of this kind, pointing out that growers were willing to accept a drop from 90 to 80 percent of parity in the soybean support with the general understanding that cottonseed would be at 75 percent of parity.

**OIL OUTLOOK.** Some of the market experts in USDA feel there is a possibility for improved vegetable oil markets later in the season, if tenderings of 1953-crop cottonseed oil to CCC continue.

This group feels that if CCC acquisitions of cottonseed oil rise much above 300 million pounds, a tight commercial supply situation is likely to develop later in the year which might force users either to switch from cottonseed to soybean oil, or come back to CCC for some of its surplus stocks on which there is a 15-cents-a-pound price tag to the close of this season. CCC had been tendered 293 million pounds of 1953 crop cottonseed oil through Feb. 3. Deliveries to CCC to the same date totalled 272 million pounds.

**SUPPORTS.** The reduction in dairy price supports will affect outcome of the struggle in Congress over 90 percent of parity versus flexible price supports for the so-called basic crops.

It has produced such a flareup on the Hill that some of the stalwart supporters of the flexible or adjustable support plan proposed by the President have now expressed privately a willingness to entertain compromise proposals.

They would be willing to go along with a one or two-year extension of 90 percent supports for the basic crops, providing a domestic surplus disposal program such as the food stamp plan were tied to it.

**USDA.** James McConnell of the big Grange-League-Federation cooperative in New York is the new head of USDA's Commodity Stabilization Service in charge of administering adjustment and price support programs. He succeeds Howard Gordon who resigned to return to the Southern States Cooperative at Richmond, Va.

The presidency of Commodity Credit Corp., a position which Gordon also held, has been shifted to True Morse, Undersecretary of Agriculture. McConnell has long been opposed to high price supports, and his appointment should strengthen Secretary Benson's efforts to win acceptance of the flexible price support system.

—s b d—

## MOBILE SHIPMENTS

The grain inspection and weighing department, Alabama State Department of Agriculture, has assumed complete supervision of weighing all grain shipments loaded at the Alabama Grain Elevator Co., Mobile, Ala., effective Jan. 15, E. S. Morgan, general manager, has announced.

The weighing is done by licensed and bonded weighmasters working under direct supervision of state-employed supervisors.

All weight tickets will be punched in the presence of state employees.

All information about the weighing of cargo should be addressed to M. L. Hibbets, chief, Grain Inspection and Weighing Department, State Department of Agriculture, P. O. Box 244, Mobile, Ala.


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Directions for using the famous "Inoculant in the Carton" will not be changed until government agronomists approve the dry-use method. Meanwhile we suggest that farmers who wish to experiment, try dry inoculation with LEGUME-AID on only part of their seed and moisten the rest in the conventional way. Then compare results.

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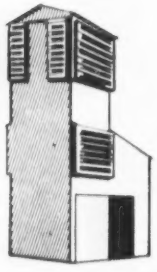

The new ECONOMY models are designed especially for outdoor use. While the BERICO model is custom-built to specific needs for indoor or outdoor drying.

All SHANZER Grain Driers operate at low temperatures to give you grain dried and cooled to perfection. Famous for high-capacity drying. Send for details . . . no obligation.

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# --- MARKET STREET ---

**We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate: 10c per word per issue. Minimum insertion $2.00.**

FOR SALE—ALL MODELS ANDERSON expellers, French screw presses, flaking and cracking rolls, stack cookers, desolventizers, filter presses, Anderson rotary tube dryers, meal coolers. Pittock & Associates, Glen Riddle, Pa.

FOR SALE—15 ANDERSON EXPELlers; 10 Shriver and Sperry Filter Presses 42"x42" to 12"x12"; Anderson & Louisville Rotary Tube Dryers; Ro-ball and Rotex Screens; Hammer Mills. Send us a list of your Idle Machines—Consolidated Products Co. Inc., 52-54 Bloomfield St., Hoboken, N. J.

FOR SALE—QUANTITY OF NEW (IN original crates) 9 in. by 36 in. N. & M. roll chills complete with journals to fit new style collar-oiling bearings. Can be converted to fit practically any style or make of roller mills at reasonable cost. For prices and information, write or wire Texas Mill Equipment Co., 167 Payne St., Dallas, Texas.

FOR SALE—USED ANGLO-AMERICAN Pellet Mill and used California Pellet Mill. Sabetha Machinery Co., Sabetha, Kansas.

## SEED DIRECTORY

A charge of $1 will be made to subscribers for listing one variety in the April issue; and 50 cents for each additional listing. Quantity for sale and variety are listed.

### ARKANSAS

Burdette—G. A. Hale, Hale Seed Farms, 6,000 bu. registered Hale Ogden 2.

Mulberry—Paul R. Alexander, 750 bu. state certified S-100; 2,000 bu. state certified Ogden.

### ILLINOIS

Aroma Park—L. L. Lowe, 2,000 bu. certified Harosoy.

Maple Park—Chris Johnson, Rt. 1, 1,200 bu. certified Blackhawk.

San Jose—Kelly Seed Co., 2,000 bu. certified Lincoln; 1,200 bu. non-certified Lincoln; 6,000 bu. certified Hawkeye; 1,200 bu. non-certified Hawkeye; 500 bu. certified Harosoy.

Ursa—Frank W. Lewis, 500 bu. certified Harosoy, $5 per bu. fob Ursa.

Whitehall—Nathaniel J. Bucklin, Jr., Ph. 299R4, or Allyn B. Nichols, Ph. WH 276R2, Rt. 1, 400 bu. certified Lincoln; 500 bu. certified Hawkeye; 600 bu. certified Adams.

### INDIANA

Francesville—Fred Gutwein & Sons, certified Hawkeye; certified Harosoy; certified Blackhawk.

Remington—Chester B. Biddle, 500 bu. red tag certified Harosoy.

Valparaiso—L. K. Wyckoff, Wyckoff Hybrid Corn Co., Rt. 3, 800 bu. certified Harosoy; 400 bu. certified Richland; 400 bu. certified Blackhawk; 500 bu. certified Hawkeye; 400 bu. uncertified Monroe; 400 bu. uncertified Korean.

### IOWA

Lytton—Fred H. Hinrichs, 350 bu. certified blue tag Blackhawk, germination 90 percent.

Marcus—Sand Seed Service, 12,000 bu. certified Hawkeye; 5,000 bu. certified Adams; 500 bu. certified Lincoln; 12,000 bu. uncertified Hawkeye; 2,000 bu. uncertified and certified Blackhawk.

Mechanicsville—Alvin Davidson & Sons, 600 bu. certified blue tag Blackhawk, germination 90 percent.

### MINNESOTA

Waterville—Clarence Bohlen, 300 bu. certified Blackhawk.

### MISSOURI

Bragg City—Jeff Wade, Jr., state certified Ogden and state certified S-100.

St. Louis—Cypress Land Farms Co., 314 Merchants Exchange, uncertified Ogden; certified Perry; uncertified S-100; certified Dorman; certified Adams.

### NORTH CAROLINA

Selma—Gurley Milling Co., Inc., 4,000 bu. uncertified Roanoke; 2,000 bu. Ogden select; 2,000 bu. Black Wilson; 500 bu. S-100 select; 1,000 bu. JEW 45 select; 1,000 bu. Clemson select; 500 bu. Woods Yellow select; 500 bu. certified Jackson.

### NORTH DAKOTA

Hankinson—George Bircken, Rt. 3, 500 bu. certified Blackhawk.

### VIRGINIA

Claybank—Louis Groh & Son, 10,000 bu. uncertified Black Wilson; 50,000 bu. uncertified Ogden.

### WISCONSIN

Granton—Ben H. Beeckler & Son, 400 bu. certified Flambeau.

### ONTARIO

Chatham—Borrowman Grain Co., Box 155, 1,500 bu. registered Harosoy; 1,000 bu. certified Lincoln; 1,000 bu. certified Hawkeye; 1,000 bu. registered Harmon.

Chatham—St. Clair Grain & Feeds Limited, 4,000 bu. registered Harosoy; 2,000 bu. certified Lincoln; 1,500 bu. certified Hawkeye.

Ridgetown—W. R. Sifton, Rt. 1, 1,000 bu. registered No. 1 Harosoy.

Please mention the Soybean Digest when writing to advertisers in these columns.

— s b d —

## HEADS MARGARINE GROUP

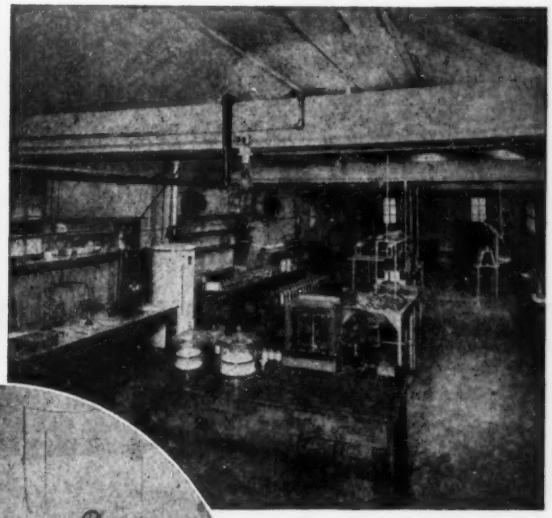
Eli Lewis, Armour and Co., Chicago, has been named chairman of the board of directors of the National Association of Margarine Manufacturers, Washington, D. C., according to an announcement by S. F. Riepma, president. Mr. Lewis is manager of Armour's margarine department.

Elected to two-year terms as directors were: S. J. Bartush, president, Shedd-Bartush Foods, Inc., Detroit, Mich.; Kenneth Hart, assistant general sales manager, Kraft Foods Co., Chicago; and Robert McDonald, merchandising manager, Good Luck division, Lever Bros. Co., New York.

L. C. B. Young, president, Osceola Foods, Inc., Osceola, Arkansas, was elected secretary of the Association.

# *Serving The Soybean Industry*

The Chicago, Ill., laboratory is equipped with the most modern equipment for refining soybean oils.



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## YOU NOW PAY $25–$200 A WEEK FOR THE WORK IT WILL DO!

**Grain, Feed and Seed Men now save $1,000 - $10,000 each year with a Hytrol**

"We are doing the same work with two men and the Hytrol that four or five men were doing before." says Duncan G. McFadyen, Upchurch, Inc., Raeford, N. C. (Estimated saving if he pays his workers $40 a week—$4,160.)

"With this unit two men can handle and stack more sacks of fertilizer faster and with less effort than six men formerly did." says A. J. Sharpe, Marked Tree Gin Company, Marked Tree, Ark. (Saving up to $8,320.)

"Our 16" Hytrol is saving 50% in labor costs." says B. A. Estes, Farmers Co-op. Grain Company, Blue Rapids, Kans.

"We find the Hytrol Conveyor a great labor saver. It enables one man to care for our seed cleaning and all the piling," says I. W. Cornell, Cornell Seed Ranch, Middleton, Ida.

"We can unload a carload of feed and stack it away in half the time it used to take us, with much less labor." says A. L. Anderson, Farmers Elev. Co., Sleepy Eye, Minn.

**KEEPS HELP HAPPY AND HEALTHY**

Harry Heist, A. & C. Feed Company, Cheyenne, Wyo. says. "One of our problems is to keep a good man from injuring his back on the 100 pound sacks. Our Hytrol is keeping our good men with us and we are no longer selling their health."

**PROTECTS BAGS, CARTONS, BLOCK SALT**

A feed dealer tells us the Hytrol unloads 40,000 pounds of block salt in 1½ hours, instead of 8 hours with less breakage. Other users say the Hytrol reduces breakage of bags and cartons. Saves losses, saves time.

**INCREASES STORAGE CAPACITY 10-40%**

Hytrol helps you stack higher and lets you use balconies and other hard-to-get-at waste space. S. S. Savage, Everett & Savage Seeds, Chester, S. C. says, "We are stacking 22 bags high with a 14' Hytrol, increasing our warehouse space by at least 30%."

No other conveyor has so many features to move your materials faster, at lower cost. Low loading end saves lifting. For greater elevation — rounded wooden cleats gently hold bag or carton from slipping. To fit every need elevate your Hytrol to angle you need, even when in use. Rolls where you need help on easy-rolling swiveled wheels. Reversible belt Direction lets you unload a truck and load it up again with a flick of the switch. **Prices $541-$917 for 10-22 ft. Lengths.**

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**13 ft.—$392.00; 15 ft.—$435.00; 17 ft.—$476.00**

# IN THE MARKETS

● **FACTORY USE VEGETABLE OILS** for November and December, as reported by Bureau of the Census. (1,000 lbs.)

| | Factory production | | Factory consumption | | Factory and warehouse stocks | |
|---|---|---|---|---|---|---|
| | Dec. 1953 | Nov. 1953 | Dec. 1953 | Nov. 1953 | Dec. 31 1953 | Nov. 30 1953 |
| Cottonseed, crude | 232,230 | 249,924 | 214,389 | 237,277 | 144,017 | 143,804 |
| Cottonseed, refined | 200,423 | 221,226 | 129,416 | 151,011 | *1,080,422 | 1,016,037 |
| Peanut, crude† | 6,155 | 7,188 | 6,369 | 5,748 | 3,742 | 2,573 |
| Peanut, refined | 6,005 | 5,417 | 2,741 | 2,957 | 5,672 | 3,545 |
| Corn, crude | 20,437 | 20,099 | 19,962 | 21,320 | 14,427 | 12,971 |
| Corn, refined | 18,585 | 19,779 | 16,965 | 18,832 | 4,153 | 3,604 |
| Soybean, crude | 226,320 | 219,304 | 186,512 | 207,382 | 122,021 | 88,437 |
| Soybean, refined | 172,446 | 192,662 | 163,834 | 188,028 | 80,822 | 74,423 |
| Sesame, refined | | | 124 | | 253 | 234 |
| Olive, edible | 92 | 46 | 157 | 170 | 4,439 | 3,231 |
| Olive, inedible | | | 7 | 10 | 31 | 26 |
| Olive, sulphur foots | | | 226 | | 1,933 | 2,158 |
| Palm, crude | | | 2,507 | 1,924 | §14,321 | §14,631 |
| Palm, refined | | | 891 | 373 | 476 | 620 |
| Coconut, crude | 35,294 | 35,028 | 42,673 | 42,548 | §66,970 | §54,809 |
| Coconut, refined | 26,569 | 25,938 | 22,369 | 23,010 | 13,843 | 13,650 |
| Palm kernel, crude | | | 4,234 | 4,234 | 2,878 | 4,289 |
| Palm kernel, refined | 2,354 | 2,362 | 2,340 | 2,351 | 528 | 517 |
| Vegetable foots (100% basis) | 21,637 | 22,114 | 12,556 | 15,994 | 45,669 | 48,533 |

*Commodity Credit Corporation, U. S. Department of Agriculture, reported 813,134,000 pounds of refined cottonseed oil owned by them on Dec. 31, 1953. † Data on production and stocks held at crude oil mill locations collected by Agricultural Marketing Service, U. S. Department of Agriculture. §Data for stocks of crude palm oil and crude coconut oil are on a commercial stocks basis and do not include figures for stock piles of strategic oils.

**FACTORY CONSUMPTION OF VEGETABLE OILS, BY USES, DURING DECEMBER 1953**

| | Edible products | | | Inedible products | | | | |
|---|---|---|---|---|---|---|---|---|
| | Shortening | Margarine | Other edible | Soap | Chemicals | Paint & varnish | Lubricants & greases | Other inedible products |
| Cottonseed, refined | 20,715 | 3,998 | 1,518 | | 82 | | | 51 |
| Peanut, refined | | | 576 | | | | | 147 |
| Soybean: | | | | | | | | |
| Crude | | | | 38 | | 290 | 37 | 889 |
| Refined | 33,224 | | 7,690 | | | 5,896 | 12 | 5,456 |
| Vegetable foots | | | | 2,778 | | 56 | | 670 |
| Hydrogenated cottonseed oil, edible | 20,985 | 26,954 | 2,053 | | | | | 2 |
| Hydrogenated soybean oil, edible | 38,386 | 48,499 | 921 | | | | | |
| Hydrogenated vegetable oil, other, edible | 1,199 | 1,130 | 645 | | | | | |

● **SUPPORT PROGRAM.** 1953-crop soybeans put under price support and loans outstanding as of Jan. 15, 1954 (1,000 bu.)

| Grains | Quantity put under loan | | | *Total quantity of loans outstanding | †Total put under price support | |
|---|---|---|---|---|---|---|
| | Farm stored | Warehouse stored | Total | | Purchase agreem'ts | |
| Wheat | 163,804 | 286,121 | 449,925 | 439,289 | 26,712 | 476,637 |
| Corn | 197,871 | 1,949 | 199,820 | 199,543 | 8,381 | 208,201 |
| Oats | 35,111 | 8,038 | 43,149 | 39,982 | 4,187 | 47,336 |
| Barley | 23,755 | 9,160 | 32,915 | 30,992 | 3,401 | 36,316 |
| Rye | 2,569 | 1,346 | 3,906 | 3,881 | 540 | 4,446 |
| Grain sorghums | 3,239 | 32,362 | 35,601 | 35,435 | 791 | 36,392 |
| Flaxseed | 5,307 | 9,069 | 14,376 | 14,089 | 1,259 | 15,635 |
| Soybeans | 12,426 | 17,180 | 29,606 | 22,525 | 702 | 30,308 |

*The difference between the total quantity placed under loan and the total quantity outstanding is for all practical purposes the quantity redeemed. †Total placed under price support is the sum of the total put under loans and purchase agreements.

● **SHORTENING.** Standard shortening shipments reported by the Institute of Shortening and Edible Oils, Inc., in pounds:

| | |
|---|---|
| Jan. 30 | 5,281,449 |
| Feb. 6 | 5,462,157 |
| Feb. 13 | 5,378,600 |
| Feb. 20 | 5,277,315 |

Grand total of shortening shipments for the year 1953 was 3,526,298 lbs. Total of shortening and edible oil shipments for January was 306,688,000 lbs.


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## Versatile Soya Protein Materials for Industrial Uses

Alpha* Protein • Prosein* • Spraysoy*
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These include paper, wallpaper, insulating board, paint, floor coverings, textiles, rubber, leather, insecticide sprays, fire-fighting foam, gasoline, grease, oil, adhesives and emulsions.

Soya Protein Materials may improve your products. Call on Glidden Technical Service to help you determine the value of any Soybean materials in your field.

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QUALITY Glidden PRODUCTS

● **SUPPLY AND DISTRIBUTION** of the 1951-53 soybean crops, reported by the Agricultural Marketing Service. (1,000 bu.)

**SUPPLY**

| Year and quarter | Stocks at beginning of period*: Farms | Interior mills & elevators | Crushing plants | Terminal markets | CCC † | Total stocks | Production | Total supply |
|---|---|---|---|---|---|---|---|---|
| **1951-52** | | | | | | | | |
| Oct.-Dec. | 2,675 | 262 | 552 | 670 | | 4,159 | 282,477 | 286,636 |
| Jan.-Mar. | 104,167 | 44,399 | 61,852 | 9,760 | | 220,178 | | 220,178 |
| Apr.-June | 60,095 | 21,858 | 42,708 | 5,457 | | 130,118 | | 130,118 |
| July-Sept. | 5,864 | 4,640 | 30,838 | 3,809 | | 45,151 | | 45,151 |
| Total | | | | | | 4,159 | 282,477 | 286,636 |
| **1952-53** | | | | | | | | |
| Oct.-Dec. | 1,958 | 296 | 611 | 710 | | 3,575 | 298,052 | 301,627 |
| Jan.-Mar. | 83,621 | 48,346 | 79,852 | 13,394 | 1,037 | 226,250 | | 226,250 |
| Apr.-June | 59,669 | 27,926 | 49,613 | 9,048 | 815 | 147,071 | | 147,071 |
| July-Sept. | 20,393 | 11,393 | 26,905 | 3,245 | 356 | 62,292 | | 62,292 |
| Total | | | | | | 3,575 | 298,052 | 301,627 |
| **1953-54** | | | | | | | | |
| Oct.-Dec. | 5,755 | 2,021 | 1,023 | 1,098 | 240 | 10,137 | 262,341 | 272,478 |
| Jan.-Mar. | 79,785 | 36,678 | 58,531 | 13,196 | 286 | 188,476 | | |

**DISTRIBUTION**

| Quarter or period | Used for seed | Net exports ‡ | Crushed at mills | Feed & residual § | Total disappearance |
|---|---|---|---|---|---|
| **1951-52** | | | | | |
| Oct.-Dec. | | 7,281 | 67,851 | 8,674 | 66,458 |
| Jan.-Mar. | | 4,256 | 68,043 | 17,761 | 90,060 |
| Apr.-June | 19,539 | 2,811 | 58,429 | 4,188 | 84,967 |
| July-Sept. | | 2,697 | 50,057 | 11,178 | 41,576 |
| Total | 19,539 | 17,045 | 244,380 | 2,097 | 283,061 |
| **1952-53** | | | | | |
| Oct.-Dec. | | 13,918 | 65,901 | 4,442 | 75,377 |
| Jan.-Mar. | | 7,426 | 60,665 | 11,088 | 79,179 |
| Apr.-June | 19,840 | 6,349 | 57,163 | 1,427 | 84,779 |
| July-Sept. | | 4,213 | 50,675 | 2,733 | 52,155 |
| Total | 19,840 | 31,906 | 234,404 | 5,340 | 291,490 |
| **1953-54** | | | | | |
| Oct.-Dec. | | ¶23,919 | 62,326 | 2,243 | 84,002 |

*Oct. 1 stocks in all positions include only old crop soybeans. †Owned by Commodity Credit Corporation in transit to ports. ‡Imports negligible. §Mostly quantity fed, but includes waste, loss, and statistical errors in estimates. ¶Partly estimated. Stocks, production, and quantity used for seed estimated by Crop Reporting Board; exports and quantity crushed from Bureau of the Census.

● **INSPECTIONS.** Soybeans, inspected by grades and percent, as reported by USDA Agricultural Marketing Service.

**SOYBEANS: Inspected receipts, by grades, and percent***

| Grade | Oct.-Jan. 1952-53 | | Oct.-Jan. 1953-54 | | January 1953 | | December 1953 | | January† 1954 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1,000 bu. | % | 1,000 bu. | % | 1,000 bu. | % | 1,000 bu. | % | 1,000 bu. | % |
| No. 1 | 20,582 | 17 | 37,445 | 27 | 1,234 | 14 | 6,233 | 28 | 6,559 | 33 |
| No. 2 | 53,843 | 44 | 54,286 | 40 | 4,024 | 45 | 8,490 | 38 | 8,408 | 43 |
| No. 3 | 22,677 | 18 | 20,614 | 15 | 1,564 | 18 | 3,610 | 16 | 2,346 | 12 |
| No. 4 | 16,977 | 14 | 15,265 | 11 | 1,287 | 14 | 2,042 | 9 | 1,298 | 7 |
| Sample | 9,237 | 7 | 9,370 | 7 | 819 | 9 | 1,916 | 9 | 911 | 5 |
| Total | 123,316 | 100 | 136,980 | 100 | 8,928 | 100 | 22,291 | 100 | 19,522 | 100 |

*Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,650 bushels. †Of the January 1954 receipts, 13,150 bushels were Black, 3,550 Mixed, and the remainder Yellow soybeans. Inspections of soybeans in January included 2,156,000 bushels as cargo lots, 403,990 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

● **EXPORTS.** U. S. exports of soybeans and oil for November, as reported by the Foreign Agricultural Service of the U. S. Department of Agriculture.

| | |
|---|---|
| Soybeans | 10,110,439 bu. |
| Soybean oil: | |
| Crude | 3,335,520 lbs. |
| Refined, but not further processed | 721,479 lbs. |
| Refined, deodorized and hydrogenated | 59,500 lbs. |

Converted to a soybean equivalent basis, the exports for November amounted to 10,506,950 bushels.

Exports for December:

| | |
|---|---|
| Soybeans | 7,697,030 bu. |
| Soybean oil: | |
| Crude | 1,678,256 lbs. |
| Refined, but not further processed | 709,657 lbs. |
| Refined, deodorized and hydrogenated | 123,493 lbs. |

Converted to a soybean equivalent basis the exports for December amounted to 7,940,972 bushels.

**SOYBEANS: U. S. Exports by Country of Destination October-December 1952 and 1953**

**1,000 Bushels**

| | 1952 | 1953 | | 1952 | 1953 |
|---|---|---|---|---|---|
| Canada | 2,526 | 2,372 | France | 0 | 881 |
| Norway | 167 | 217 | West Germany | 1,525 | 3,248 |
| United Kingdom | 37 | 1,085 | Switzerland | 0 | 19 |
| Netherlands | 2,641 | 5,331 | Japan | 4,808 | 7,482 |
| Belgium and Luxembourg | 543 | 599 | Others | 1,671 | 2,382 |
| | | | Total | 13,918 | 23,616 |

U. S. Bureau of the Census.

● **STOCKS.** Production and Marketing Administration's commercial grain stocks report. (1,000 bu.)

| | Jan. 25 | Feb. 1 | Feb. 9 | Feb. 15 | Feb. 23 |
|---|---|---|---|---|---|
| **U. S. Soybeans in Store and Afloat at Domestic Markets** | | | | | |
| Atlantic Coast | 2,456 | 2,036 | 1,433 | 1,414 | 1,173 |
| Gulf Coast | 980 | 1,221 | 1,251 | 1,264 | 1,582 |
| Northwestern and Upper Lake | 753 | 713 | 687 | 693 | 803 |
| Lower Lake | 5,522 | 5,300 | 5,157 | 4,985 | 4,936 |
| East Central | 836 | 526 | 452 | 494 | 497 |
| West Central, Southwestern & Western | 1,699 | 1,666 | 1,622 | 1,589 | 1,510 |
| Total current week | 12,246 | 11,462 | 10,602 | 10,439 | 10,501 |
| Total year ago | 12,305 | 11,837 | 11,868 | 11,810 | 10,710 |
| **U. S. Soybeans in Store and Afloat at Canadian Markets** | | | | | |
| Total current week | 180 | 274 | 274 | 274 | 274 |
| Total year ago | 675 | 675 | 584 | 584 | 540 |
| **Canadian Soybeans in Store and Afloat at U. S. Markets** | | | | | |
| Total current week | 36 | 36 | 19 | 19 | 19 |
| Total year ago | 0 | 0 | 0 | 0 | 0 |
| **Total North American Commercial Soybean Stocks** | | | | | |
| Current week | 12,462 | 11,772 | 10,895 | 10,732 | 10,794 |
| Year ago | 12,980 | 12,512 | 12,452 | 12,394 | 11,250 |

● **MARGARINE PRODUCTION.** Reported by the Bureau of the Census from reports of all known manufacturers producing margarine.

**PRODUCTION OF MARGARINE: CUMULATIVE ANNUAL TOTALS (1,000 pounds)**

| | Total | Uncolored | Colored |
|---|---|---|---|
| 1953 annual production | 1,291,803 | 63,768 | 1,228,035 |
| 1952 annual production | *1,285,975 | *129,726 | *1,156,249 |
| 1951 annual production | 1,040,718 | 211,662 | 829,056 |
| 1950 annual production | 937,045 | 437,402 | 499,643 |

*Revised. Data through June 1950 are from Bureau of Internal Revenue. Prepared by Bureau of the Census, industry division, chemicals section.


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● **PROCESSING OPERATIONS.** For December 1953 and January 1954. Reported by Bureau of the Census.

**RAW MATERIALS AT OIL MILLS: RECEIPTS, CRUSHINGS, AND STOCKS, JANUARY 1954-DECEMBER 1953 (Tons of 2,000 pounds)**

| Raw Materials | Receipts at mills | | Crushed or used | | Oil mill stocks end of month | |
|---|---|---|---|---|---|---|
| | Jan. 1954 | Dec. 1953 | Jan. 1954 | Dec. 1953 | Jan. 31 1954 | Dec. 31 1953 |
| Soybeans | 501,990 | 527,386 | 623,353 | 622,751 | 1,634,557 | 1,755,920 |
| Cottonseed | 237,261 | *809,972 | 711,743 | 717,999 | 2,390,245 | *2,864,727 |
| Peanuts† | 7,716 | 6,927 | 8,717 | 7,984 | 2,225 | 3,226 |
| Corn germs | 25,406 | 25,107 | 25,593 | 25,249 | 1,619 | 1,806 |
| Copra | 33,285 | 26,298 | 30,074 | 27,066 | 15,715 | 12,504 |
| Flaxseed | 83,030 | 65,126 | 99,420 | 76,479 | 116,841 | 133,231 |
| Tung nuts | 27,356 | 26,184 | 22,745 | 24,836 | 10,513 | 5,902 |
| Castor beans | 10,879 | 9,731 | 5,526 | 7,556 | 22,900 | 17,547 |
| Olives | 1,610 | ‡ | 1,516 | 350 | 158 | 64 |
| Other | 3,414 | 4,305 | 4,235 | 4,273 | 4,474 | 5,295 |

*Revised. †Data on peanuts collected by Agricultural Marketing Service, U. S. Department of Agriculture. ‡Included in "Other" to avoid disclosure of figures for individual companies.

**SOYBEANS: RECEIPTS, CRUSHINGS, AND STOCKS AT OIL MILLS, BY STATES, JANUARY 1954-DECEMBER 1953 (Tons of 2,000 pounds)**

| State | Receipts at mills | | Crushed or used | | Stocks at mills | |
|---|---|---|---|---|---|---|
| | Jan. 1954 | Dec. 1953 | Jan. 1954 | Dec. 1953 | Jan. 31 1954 | Dec. 31 1953 |
| U. S. | 501,990 | 527,386 | 623,353 | 622,751 | 1,634,557 | 1,755,920 |
| Arkansas | (1) | (1) | (2) | (2) | 32,546 | 44,893 |
| Illinois | 229,041 | 253,481 | 239,112 | 235,219 | 675,797 | 685,868 |
| Indiana | 48,555 | 34,885 | 77,234 | 76,245 | 167,998 | 196,677 |
| Iowa | 98,754 | 116,621 | 117,841 | 113,535 | 244,518 | 263,605 |
| Kansas | (2) | (2) | 7,133 | 10,459 | (2) | 18,900 |
| Kentucky | 13,572 | 12,590 | 14,669 | 14,901 | 67,577 | 68,674 |
| Minnesota | 40,904 | 42,160 | 39,964 | 40,382 | 32,289 | 31,349 |
| Mississippi | (2) | (2) | (2) | (2) | 22,341 | 24,983 |
| Missouri | (2) | 15,565 | 21,618 | 20,266 | (2) | 53,891 |
| Nebraska | (2) | 2,757 | (2) | (2) | (2) | (2) |
| North Carolina | (1) | (2) | (2) | 1,638 | (2) | 6,108 |
| Ohio | 53,349 | 47,586 | 75,139 | 74,429 | 220,446 | 242,236 |
| Oklahoma | (1) | (1) | — | (2) | — | (2) |
| All other | 18,620 | 11,068 | 30,643 | 35,677 | 171,045 | 118,736 |

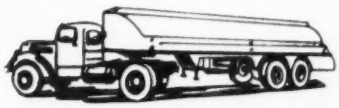
(1) Receipts exceeded by reshipments of beans previously received and held in the State. U. S. receipts are on net basis, excluding transfers between mills. (2) Included in "All other" to avoid disclosure of figures for individual companies.

**SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, JANUARY 1954-DECEMBER 1953**

| State | Crude oil (1000 pounds) | | | | Cake and meal (tons) | | | |
|---|---|---|---|---|---|---|---|---|
| | Production | | Stocks | | Production | | Stocks | |
| | Jan. 1954 | Dec. 1953 | Jan. 31 1954 | Dec. 31 1953 | Jan. 1954 | Dec. 1953 | Jan. 31 1954 | Dec. 31 1953 |
| U. S. | 228,433 | 226,320 | 54,258 | 36,463 | 492,738 | 494,321 | 128,615 | 104,835 |
| Arkansas | (1) | (1) | (1) | (1) | (1) | (1) | 833 | 1,290 |
| Illinois | 90,045 | 88,338 | 18,960 | 12,802 | 179,278 | 178,967 | 59,442 | 51,524 |
| Indiana | 28,239 | 27,938 | 9,368 | 6,433 | 62,529 | 61,809 | (1) | (1) |
| Iowa | 42,978 | 40,596 | 10,130 | 5,372 | 96,759 | 92,953 | 13,730 | 7,413 |
| Kansas | 2,653 | 3,564 | 1,084 | 701 | 6,000 | 8,668 | (1) | (1) |
| Kentucky | 5,446 | 5,470 | 560 | 328 | 11,822 | 12,013 | 642 | (1) |
| Minnesota | 14,139 | 14,076 | 4,030 | 2,518 | 32,431 | 32,407 | 1,491 | 3,936 |
| Mississippi | (1) | (1) | (1) | (1) | (1) | (1) | 443 | 468 |
| Missouri | 7,863 | 7,335 | 1,524 | 1,569 | 17,711 | 16,462 | 1,564 | 1,202 |
| Nebraska | (1) | (1) | 507 | 535 | (1) | (1) | (1) | (1) |
| N. Carolina | (1) | 509 | (1) | 303 | (1) | 1,358 | 3,176 | 4,355 |
| Ohio | 26,720 | 26,374 | 5,379 | 3,789 | 61,359 | 60,751 | 3,631 | 3,186 |
| Oklahoma | — | (1) | — | (1) | — | (1) | (1) | (1) |
| All other | 10,350 | 12,120 | 2,716 | 2,113 | 24,849 | 28,933 | 43,663 | 31,461 |

(1) Included in "All other" to avoid disclosure of figures for individual companies. Prepared by Bureau of the Census, industry division, chemicals section.


*Ship By*



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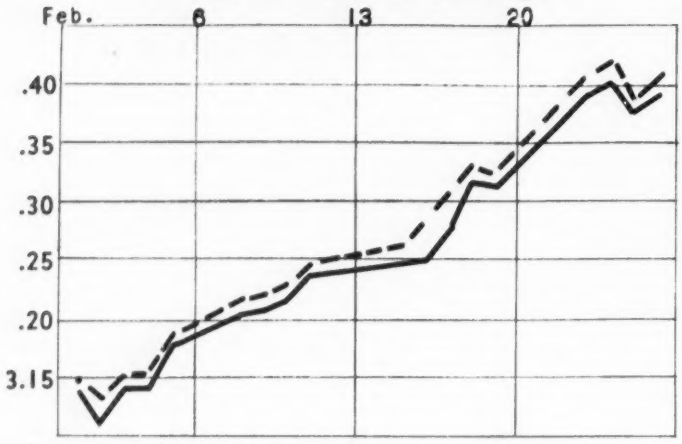
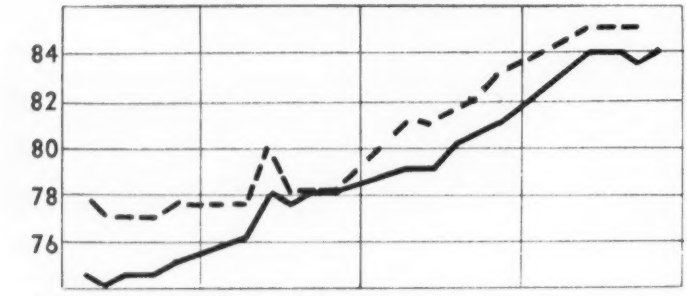


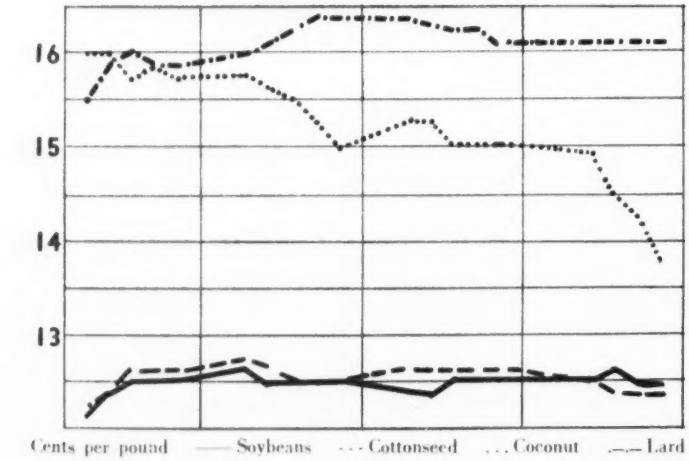

Dollars per bushel —March - - - May

**Soybean Oil Meal, Decatur, Bulk**




Dollars per ton —44% protein - - - 41% protein

**Crude Vegetable Oils, Tankcars**




Cents per pound —— Soybeans - - - Cottonseed . . . Coconut .—.— Lard

## February Markets

FEBRUARY saw a bull market that pushed soybeans to three-year highs and continued the almost steady price climb since harvest. March futures advanced as much as 29 cents during the month. Over 320 million bushels in soybean futures were traded in Chicago the first 13 trading days of the month, almost 60 million bushels more than the entire 1953 crop.

Meal also advanced $10 in February, influenced by the strength in beans and a good mixed feed demand, and established a high point above the old OPS ceiling. Soybean oil picked up as much as a half cent.

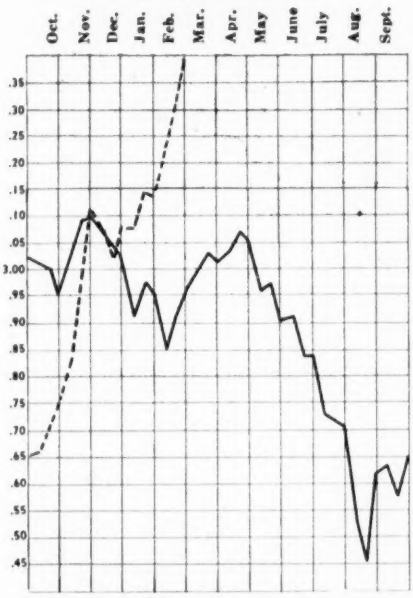
Contributing to the strength in the bean market: the season's small supply—19 million bushels less than were actually used last year; a larger volume of processing than can be kept up for the balance of the season; record exports of beans running 10 million bushels ahead of last year so far this season; an expected larger-than-usual demand for seed this spring; and improved feed demand.

On the other hand overhanging the market was the possibility of a big 1954 planted acreage, and the chance of unfavorable government action toward soybeans in lowering cottonseed supports or in disposing of surplus cottonseed oil and butter.

**SOAPSTOCKS.** Acid soybean soapstocks delivered Midwest advanced from 5.75 cents a pound to 7.12 during February. Raw soybean soapstocks advanced from 2.5 to 3.12 cents a pound.

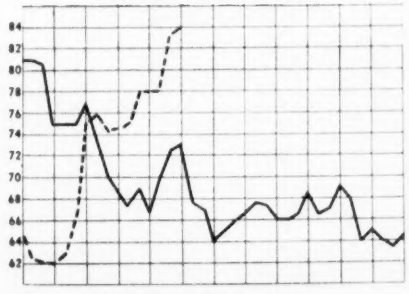
**TRENDS AT A GLANCE**

**NEAR FUTURES SOYBEANS**



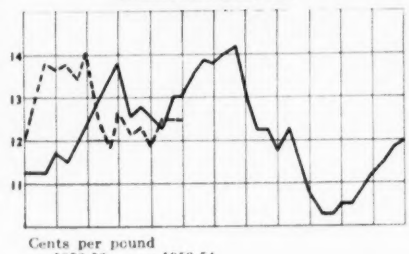

Dollars per bushel

**SOYBEAN OIL MEAL BULK**



Dollars per ton

**CRUDE SOYBEAN OIL**



Cents per pound
—1952-53 - - - 1953-54

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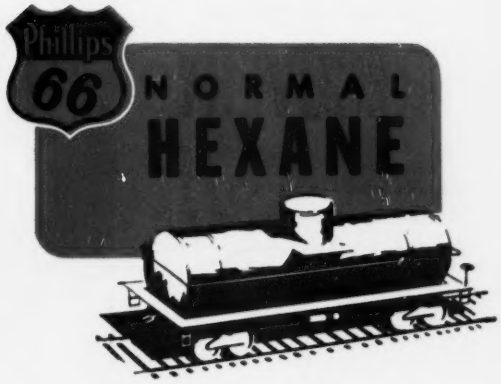


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